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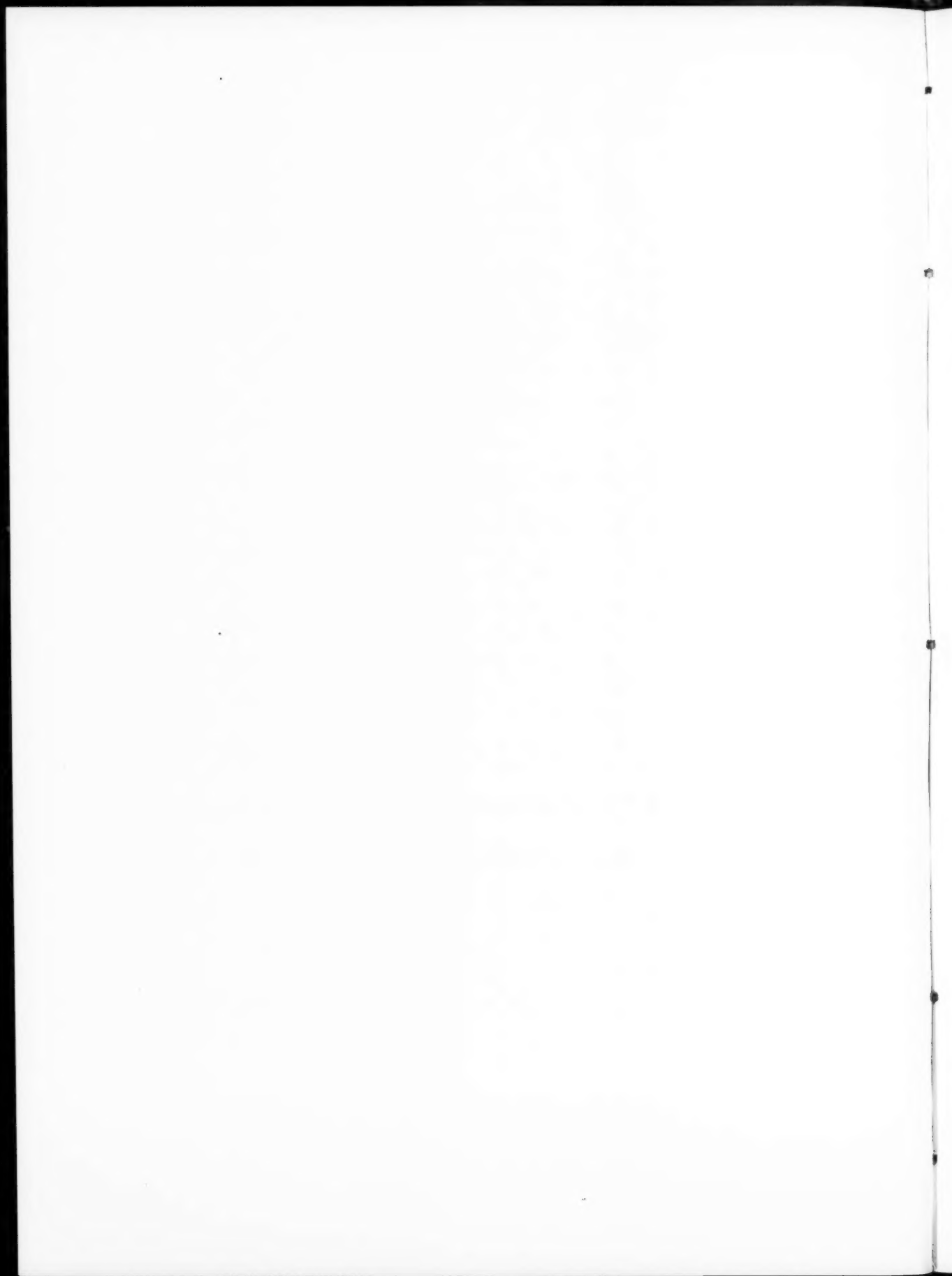
The Thirty-eighth General Meeting of the Archaeological Institute of America will be held in Chicago, Illinois, December 28-30, 1936. The Annual Meeting of the Council will be held during this period.

Members of the Institute and others who wish to present papers at the meeting are requested to send the title and a brief résumé of their papers to Professor Clarence Ward, General Secretary, Archaeological Institute of America, Oberlin College, Oberlin, Ohio, before November 15, 1936.

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ARCHAEOLOGICAL NOTES

A GREEK STELE IN THE METROPOLITAN MUSEUM¹

THE Metropolitan Museum of Art has recently acquired an exceptionally attractive grave stele, dating probably from about 400 B.C.² (Fig. 1). On it are carved two figures in a beautifully rhythmical composition—a woman leaning against a pillar and a little attendant holding her mistress' jewel box and looking up wistfully at her. The woman wears a chiton, a mantle (of which she holds a fold in her right hand), sandals, earrings (of the rosette-and-leech type), and a headdress (similar to that on the stele of Hegeso in Athens). The girl has a peplos with overfold, ungirded and so open along the whole right side.

The stele is remarkably well preserved. There are a number of breaks, but nothing important is missing³ except the upper left corner with the architectural framework. Of this enough remains to have made the reconstruction possible,⁴ for the right corner of the crowning pediment is preserved, including the angle which gives the pitch, and, above the girl's head, a small bit of the left pillar, supplying its exact width. Only the name of the woman—which was doubtless inscribed on the architrave—is lost (Fig. 2).

One of the chief attractions of the stele is the sense of movement in the seemingly quiet composition. The principal figure is placed diagonally across the slab, in three-quarter view, the upper part of the body leaning sharply back, the left leg brought well forward. The transparency of the drapery, which brings out clearly the contours of the body in its oblique posture, helps to accentuate this feeling of motion. Thereby the design acquires a remarkable vivacity.

H. Diepolder⁵ in his able analysis of the development of the Athenian grave stelae, has shown that this feeling of almost exaggerated movement in seated and quietly standing figures is characteristic of a small group of monuments (Phainarete, Phrasikleia, etc.), datable in the last decade of the fifth century: "The figure or figures seem to turn on their axes, as if to free themselves from their background. . . . The upper part of the body is made to lean backward, the lower part is brought forward, the free leg is bent sharply at the knee and stands out prominently in contrast to the leg carrying the weight, which is completely hidden by the drapery. . . . And yet the gestures remain simple and quiet. The figures are united in no particular action, only by a similar rhythm of movement."⁶ This description fits our relief admirably.

¹ Cf. *Metropolitan Museum Bulletin*, XXXI, 1936, pp. 108–112.

² Acc. no. 36.11.1. Pentelic marble. H. of slab as preserved $70\frac{1}{16}$ in. (1.78 m.), h. as restored 74 in. (1.88 m.), thickness $6\frac{5}{16}$ in. (17.6 cm.); h. of woman $57\frac{1}{2}$ in. (1.46 cm.), h. of girl $41\frac{3}{4}$ in. (1.06 m.). The stele cannot be a very recent discovery, as it was in Paris for a number of years previous to its acquisition by the Museum.

³ Only the tip of the woman's nose, parts of her right hand and of her left leg, and bits of drapery here and there. The face of the woman has suffered a little from cleaning.

⁴ Nothing else has been restored except the missing slivers at the junctures of the breaks.

⁵ *Die attischen Grabreliefs des 5. und 4. Jahrhunderts v. Chr.*

⁶ Diepolder, *op. cit.*, pp. 23 ff. (my translation).



FIG. 1.—GREEK STELE IN THE METROPOLITAN MUSEUM OF ART



FIG. 2. — DETAIL OF STELE

The rendering of the drapery also points to a date around 400 B.C. The transparency of the garment where it is laid directly on the body, the curving ridges on either side of the left leg, the curving ridge between the breasts, the angular, bunched folds above the left forearm, the manner in which the mantle is draped over the left upper arm—all occur again in such late fifth-century works as the Phainarete, the Philo, and the Ktesileos in Athens.

In quality of workmanship the New York stele is well above the average. It is not on a par, of course, with such masterpieces as the Hegeso. But it is the most complete and attractive of its type in the New York collection, and for that matter, it compares favorably with most other stelae outside of the rich and incomparable series in the National Museum in Athens.

AN EARLY TERRACOTTA SLAB IN THE METROPOLITAN MUSEUM¹

Another interesting new acquisition of the Museum is the corner of a terracotta slab with a lion painted on it (Fig. 3).² Its date would seem to be the end of the seventh century—the period of the Piraeus and Nessos amphorae. As our store of remains of this great period is slender indeed, one welcomes the addition of this impressive—though unfortunately fragmentary—piece.

Only the forepart of the lion remains. It was painted on a yellowish gray slip in black glaze—now largely reddish—with details and outlines incised. No traces of the superimposed red which doubtless differentiated various parts of head and body now remain. That the execution is Attic rather than Corinthian is indicated, for instance, by the flamelike edge of the mane.³ The clay is pinkish buff as in Attic pottery. A single glaze line frames the picture, suggesting that the composition was a unit, not part of a continuous series as are the terracotta plaques in Berlin, which perhaps decorated the outside of a tomb.⁴ And there are no suspension holes in our slab, so it was probably not votive. At the back it is roughly trimmed along the edge of the preserved side.⁵ One therefore thinks of a metope of a small shrine.

GISELA M. A. RICHTER

METROPOLITAN MUSEUM OF ART

¹ See *Metropolitan Museum Bulletin*, XXXI, 1936, pp. 116 f.

² Acc. no. 35.11.15. Height $12\frac{3}{4}$ in. (32.4 cm.), width $11\frac{5}{16}$ in. (28.7 cm.) as preserved. The provenance is said to be Attica.

³ See Payne, *Necrocorinthia*, p. 344.

⁴ Hirschfeld, *Antike Denkmäler*, II, 1891–1892, pp. 4–7, pls. 9–11.

⁵ Thickness of slab where untrimmed $1\frac{1}{8}$ to $1\frac{1}{16}$ in. (2.7 to 2.8 cm.); where trimmed $\frac{7}{8}$ to $1\frac{5}{16}$ in. (2.2 to 2.4 cm.).



FIG. 3.—EARLY TERRACOTTA SLAB IN THE METROPOLITAN MUSEUM OF ART

RECENT ACQUISITIONS OF THE MUSEUM OF FINE ARTS, BOSTON

1. **ARCHAIC MARBLE HEAD** (Figs. 1A-C). Ht., 25 cm. Though more than half of the face has been broken off and there are other lesser damages, the magnificent forms and contours of the head are still impressive from whatever point of view one looks at it. Enough remains of the double row of spiral curls bordering the forehead to show the beauty of its design and execution, and the modelling of the preserved portion of the



FIG. 1A.—ARCHAIC ATTIC HEAD

face suffices in itself to place the head among the masterpieces of pre-Persian Athenian sculpture. Moreover, the disaster which caused the mutilations must have happened not long after the statue was set up, for the fragment is in a remarkably fresh condition, with remains of its original coloring. There are slight traces of red paint in one of the incised circles marking the iris of the eye. Larger patches of red are to be seen on some of the spiral curls and on the roughly chiselled surface which they surround. And the whole top of the head has a faintly reddish tone in contrast with the perfectly smoothed surface of the flesh, which has taken on a warm creamy-brown patina from the soil. The material is Greek island

marble, large-grained and fully crystallized. The lower end of a bronze meniskos is still imbedded in the apex of the head.

The fragment, probably from a life-size kouros, is to be dated in the third quarter of the sixth century B.C.—*M.F.A. Bulletin*, 1936, p. 6.

2. **HEAD OF A YOUTH** (Figs. 2A-C). Large-grained Greek island marble. Ht., 37 cm.; height of head, 17.2 cm. The bust is shaped like the top of a herm; but its lower surface, which has shallow tool-marks running in uneven lines across it, lacks a hole for the dowel which would seem to be needed to secure the bust on a shaft; and both head



FIG. 1c



FIG. 1b

ARCHAIC ATTIC HEAD IN THE MUSEUM OF FINE ARTS, BOSTON



FIG. 2A



FIG. 2B

HEAD OF A YOUTH, BOSTON MUSEUM

and bust are cut off behind in a roughly picked vertical plane, as if for setting against a wall. The irregular working of the sides of the bust constitutes another puzzle. The surfaces of the head, neck and chest are smoothed, except near the back. The face is corroded, especially on its right side; part of the nose is broken off; and two flaws in the marble run down from the top of the head to the jaw. But these accidental blemishes do not impair the impression made by the proud carriage of the head on the slender column of the neck and the extraordinary life of the countenance with its harmonious blend of strength and grace.

Unmistakably a Greek original, to be dated not far from 480 B.C. Close parallels are not easy to find. One thinks of the *μειδιάμα σεμνὸν καὶ λεληθὸς*, which Lucian admired in the Sosandra of Kalamis. — *M.F.A. Bulletin*, 1936, p. 49.



FIG. 2C.—HEAD OF A YOUTH



FIG. 3.—BRONZE STATUETTE OF A YOUTH

3. BRONZE STATUETTE OF A YOUTH (Fig. 3). Ht., 9.5 cm. Said to come from Phe-neos in Arcadia. The alert little figure walks to the left with the (missing) right arm extended. The features are somewhat bluntly modelled. The rendering of the long hair as a pointed mass and the incised pattern of double triangles along the upper border of the chiton are found on other bronzes from Arcadia which are held to be local products. Professor Langlotz, however, judging from a photograph, calls it

certainly Spartan and dates it about 540 B.C. He suggests that, as it is designed to be seen in profile, it may belong to a larger votive offering with several walking figures. — *M.F.A. Bulletin*, 1936, p. 53.

4. BRONZE STATUETTE OF A YOUTH (Fig. 4). Ht., 15.3 cm. Said to have been found at a place known as "Kastritsi," near the road between Kalavryta and Patras. The right arm has been accidentally bent into an attitude which recalls Minoan figures; the upper arm was originally horizontal, the forearm lifted with the palm of the hand to the front in a gesture of adoration. Except for some coarse file-marks, the surface of the bronze has been left as it came from the mould. The well-balanced pose, the tilt of the pilos, and the simple design of the chlamys make a remarkably pleasing composition. Probably Arcadian, second half of the fifth century B.C. — *M.F.A. Bulletin*, 1936, p. 54.

5. MINIATURE BRONZE CHARIOT-WHEEL with dedi-



FIG. 4.—BRONZE STATUETTE OF A YOUTH



FIG. 5.—BRONZE VOTIVE CHARIOT-WHEEL

catory inscription to Apollo: Φάλας πεδιαρχεῖον ἀνέθηκε τοπόλονι. Sixth or fifth century B.C. (Fig. 5) Diam., 16 cm. The nave projects considerably on both sides. The felloe, on the other hand, is unnaturally thin; it decreases in thickness from 5 mm. near the inner edge to about 1 mm. at the rim. The object is probably complete in itself, not a part of a votive chariot. It is said to come from Galaxidi near Delphi, and the letters of the inscription conform to the Phocian alphabet. Mr. Wade-Gery suggests that the puzzling second word may contain a reference to the Plain of Krisa, and



FIG. 6A.—OVERSE



FIG. 6B.—REVERSE

that the stewards of the Pythian Games (corresponding to the Hellanodikai at Olympia) were perhaps called *Pediarchoi*.¹

6. A DEMARETEION (Fig. 6A-B). Weight, 43.39 grammes. Thirteen specimens of

¹ In *Greek Poetry and Life* (Essays presented to Gilbert Murray on his seventieth birthday), p. 64, note 3.



FIG. 7.—TERRACOTTA STATUETTE, WOMAN HOLDING DOVE



FIG. 8.—TERRACOTTA DUCK WITH DUCKLINGS



FIG. 9.—CYCLADIC IDOL



FIG. 10.—LATE MYCENAEAN KERNOS

this famous coin have hitherto been known. One has disappeared, and several others are imperfectly preserved. The new example must be ranked with the three best, — in the British Museum, Berlin, and the Jameson collection in Paris. It shows a new combination of dies: the obverse is from the same die as that of the Jameson coin, while the reverse duplicates that of the finer of the two specimens in Berlin (Boehringer, *Die Münzen von Syrakus*, obverse die no. 192, reverse no. 264). — *M.F.A. Bulletin*, 1935, p. 51.

7. TERRA-COTTA STATUETTE. Woman holding dove, later sixth century B.C. Found in Sicily; Samo-Milesian style. — Grace W. Nelson, *M.F.A. Bulletin*, 1935, p. 49.

8. TERRA-COTTA DUCK WITH DUCKLINGS. Height, 13 cm. Reddish brown clay; white slip. Two holes, for suspension, in the top of the motherbird's body. Probably first half of the fifth century B.C.

9. CYCLADIC IDOL. Height, 16.6 cm. The painted decoration well preserved: narrow bands round the top and base of the neck; two rows of dots running across the top of the forehead; numerous dots running across the tip of the nose and spreading over the cheeks.

10. KERNOS. Diameter, 26.7 cm. The bull's muzzle pierced by three holes. One of the two birds perched on the top of the twisted handle is missing. Five small vases stood at intervals on the circular tube. An amphora, two kraters and the bottom of a fourth vase are preserved; the fifth is missing. All are pierced below, so that liquids poured into them would flow into the tube and could be poured out through the holes in the bull's mouth. An unusually large and elaborate example of this type of libation vessel. Late Mycenaean, judging from the style of the painted patterns.

L. D. CASKEY

MUSEUM OF FINE ARTS
BOSTON

THE DATE OF THE INSCRIPTION OF CLAUDIUS ON THE ARCH OF TICINUM

IN 1908 Professor Tenney Frank advanced the theory¹ that the inscription of Claudius on the arch erected in honor of the family of Augustus at Ticinum in 7/8 A.D.² was probably a later addition made by Claudius himself during his trip north to join the emperor Caligula in Gaul. Until the appearance of his article the inscription went unquestioned as the earliest dated inscription of Claudius which we possess. Mommsen³ was the first to take the presence of a statue of Claudius on a monument so obviously dynastic as the arch of Ticinum as proof that Claudius was considered by Augustus as a prince of the imperial family. Recently Professor Ludwig Curtius appealed to this inscription in arguing for the early date of the Della Valle relief of Claudius in the Villa Medici.⁴ Still more recently, in volume X of the Cambridge Ancient History, Professor M. P. Charlesworth has referred his readers to the article of Professor Frank.⁵ To the historian, therefore, and to the iconographer it is of more than chronological interest whether this inscription dates from 7/8 A.D. or from 37-41 A.D. In this paper I propose to show that there is no reason to believe that the inscription of Claudius was not inscribed contemporaneously with the other nine that appeared on the monument.

Professor Frank starts from the premise that Claudius was so despised by his relatives and so completely excluded from the imperial family that his name could not have appeared on a dynastic monument in 7/8 A.D. But this view is open to serious question. The locus classicus for those who hold this opinion of Claudius is the letters of Augustus to Livia,⁶ the most uncomplimentary of which was very probably written in 12 A.D., five years after the erection of the arch at Ticinum.⁷ Yet even these letters make it abundantly clear that Augustus was by no means certain that Claudius was unfitted to take his place in the dynastic scheme. Suetonius,⁸ to be sure, *infers* that Augustus came to a definitely unfavorable opinion of Claudius *later*. Just as in the case of Agrippa Postumus, the only living male descendant of Augustus whose name does not appear on the arch at Ticinum,⁹ it was again *later*, three years after Agrippa Postumus had been adopted, that Augustus reached his final decision to disinherit him.¹⁰ But the significance of these letters,

¹ *Classical Quarterly* II, 1908, pp. 89-92.

² *C.I.L.* V, 6416, 10 = Dessau 107, 10.

³ *Gesammelte Schriften* VIII, 1, 100.

⁴ *Röm. Mitth.* XLVII, 1932, p. 247, note 2.

⁵ *C.A.H.* X, p. 975.

⁶ Suetonius, *Claudius*, 4.

⁷ Smilda, *Vita Divi Claudii*, 21.

⁸ *Loc. cit.*

⁹ Mommsen was the first to point this out (*op. cit.*, 8, 1, 99).

¹⁰ Gardthausen (in *Real-Encyclopädie* 10, 184; *Augustus und seine Zeit* 1, 3, 1257) sees in Claudius the successor of Agrippa's prospects. The aging Augustus, who had already buried three adopted sons and a favorite step-son, and who had been forced to disinherit the last adopted son of his own blood, was probably more sensitive to the vicissitudes of rearing successors and the uncertainties attending the unfolding of their character than the modern historian who summarizes the childhood and young manhood of later emperors from scanty sources. Augustus' dynastic anxieties at this time probably account for his consent to the appearance of his great-grandsons, Nero and Drusus, the sons of Germanicus, on the arch of Ticinum although they were only about 18 and 6 months old respectively at the time (Gardthausen, *op. cit.*, 10, 474, 434; Dessau, note 10 ad 107). Incidentally, the appearance of Nero and Drusus on the arch raises a problem that seems to have been overlooked. What form did their portraits take?

which seems to have been overlooked, is that they reveal that Augustus was under pressure from both Livia and Antonia to advance Claudius on his public career, in spite of Suetonius' gossip about their scorn and mistreatment of him.¹ Additional evidence of Livia's interest in Claudius is the fact that his first wife was Plautia Urgulanilla,² the granddaughter of Livia's good friend Urgulania,³ whom he could hardly have married without the knowledge or approval of Livia, not to say her direct mediation. Nor can it be overlooked that Claudius was first affianced to a great-granddaughter of Augustus, Aemilia Lepida, the child of the younger Julia and L. Aemilius Paullus.⁴ The breaking of this engagement because of her parents' conduct is also significant for Claudius' early place in the dynastic plans of Augustus.

More decisive, however, are the following facts. In 6 A.D. Claudius was associated with Germanicus in giving games in honor of their father Drusus.⁵ This was at a time, moreover, when the people of Rome had been in a state of commotion because of rumors of a revolution and the scarcity of grain, when, that is, Augustus could afford to take no chances with the possibility of eccentric behavior on the part of Claudius. In 8 A.D., the very year in which the arch of Ticinum was erected, Augustus gave games in the name of Germanicus and Claudius at Rome.⁶ It was Augustus also who permitted Claudius to be co-opted into the augural college sometime between 7/8 and 14 A.D.⁷ In the reign of Tiberius, Claudius was chosen by the senate in 14 A.D. along with Tiberius, Drusus, and Germanicus as members *extra ordinem* of the newly established *sodalitas Augustalis*.⁸ The reaction of the Roman populace

It seems unlikely that they were portrayed realistically as the mere babies they were at the time. The small children that appear on the Ara Pacis and the little Cupid riding a dolphin at the feet of the Prima Porta Augustus, in whom Studniczka (*Röm. Myth.* 25, 1910, pp. 50-55) sees a portrait of C. Caesar, are not of much help as parallels, because on the Ara Pacis the portraits are sculptured in relief and in the case of the Prima Porta Augustus the Cupid, even if its portrait character is granted, is an attributed detail of a substantive portrait. The least objectionable solution of the difficulty on the arch of Ticinum appears to be the assumption that the baby great-grandsons were idealized to appear considerably older than they actually were at the time.

¹ Suetonius, *op. cit.*, 3.

² *Prosopographia* 3, 48, 368.

³ Tacitus, *Annals* 2, 34; 4, 21-22; *Prosopographia* 3, 491, 684.

⁴ *Prosopographia* 12, 71, 419. The engagement with Aemilia Lepida was broken because her father, L. Aemilius Paullus (*Ibid.*, 12, 66, 391), was convicted of complicity in a plot against Augustus, and because of her mother Julia's immoral conduct (*Ibid.*, 2, 223, 421).

⁵ Dio 55, 27, 3; Suetonius, *op. cit.*, 2, who adds the detail that Claudius presided over the games ob hanc valitudinem . . . palliolatus novo more. But Suetonius only cites this fact to show that Claudius' health had to be carefully guarded (see Smilda, *op. cit.*, 16). There is no reason to believe that Claudius' relatives were trying to conceal him from public gaze by this means. It would have been simpler, had this been their object, not to allow him to appear at all. ⁶ Dio 55, 33, 4.

⁷ Suetonius, *op. cit.*, 4; *CIL* 3, 381; 5, 24 = Dessau 198. The coin cited by Gaheis (in *Real-Encyklopädie* 3, 2783) is false (Mattingly-Sydenham, *Roman Imperial Coinage* 1, p. 128, note).

⁸ Tacitus, *op. cit.*, 1, 54; Suetonius, *op. cit.*, 6; *CIL* 3, 381; 5, 24 = Dessau 198. Professor Frank believes (*Classical Quarterly* 2, 1908, 90, note 1) that Claudius' admission to the *sodalitas Augustalis* when it was first established in 14 A.D. has no value as evidence supporting the view that Claudius was regarded as a member of the imperial family at that time. He argues that the accepted view that Claudius became a *sodalis Titii* at a later date, possibly in the reign of Caligula (Gaheis, *op. cit.*, 3, 2783) is not necessarily correct. Professor Frank prefers to think that Claudius was made *sodalis Titii* prior to becoming an *Augustalis*. Claudius' election as *sodalis Augustalis* in 14 A.D., he continues, "is probably due to his position in the Claudian family, not to any supposed standing in the Julian line." But I cannot accept this view (see Wissowa, *Religion und Kultus der Römer*,² p. 345). The *sodales Titii* appear to have been established by Augustus between 31-21 B.C. (Wissowa, *op. cit.*, p. 74). In 21 B.C. neither

to the betrothal of Sejanus' daughter to the son of Claudius shows very clearly that in the public mind Claudius was still closely associated with the imperial family.¹ His selection by the equites as their patronus in pleading before the consuls on two separate occasions, in 14 A.D. and 31 A.D., points in the same direction.²

The sum of this evidence seems to me more than to outweigh the objections which Professor Frank raises against the view³ that Claudius received recognition as a member of the imperial house before his accession.⁴

Professor Frank takes as his second premise the conjecture that Claudius used the name Tiberius Claudius Nero Germanicus only during his first consulship in 37 A.D.⁵ and immediately after⁶ and that its appearance, therefore, on the arch at Ticinum can only mean that the statue and inscription of Claudius were set up between 37-41 A.D.

For the period after his accession the explanation of the failure of the cognomen Nero to appear on Claudius' inscriptions is simple and readily granted: Nero was not part of the official name Tiberius Claudius Caesar Augustus Germanicus which Claudius took after he became emperor.⁷ For the period before Claudius' accession

Germanicus nor Claudius was yet born. Nor does the title *sodalis Titii* appear on the inscription of Medullina, whose date is almost certainly 10-12 A.D. (see the subsequent discussion of this inscription). Its absence from Claudius' inscription at Ticinum is also to be remarked, though this inscription, of course, is still *sub iudice*. It does not, therefore, seem "very likely that Augustus in restoring the ancient Sabine worship would have made the members of the Claudian family (Tiberius, Drusus, Germanicus, and Claudius) its priests, since the antiquarians were then busy tracing the Claudian line back to that tribe."

¹ Tacitus, *op. cit.*, 3, 29; 4, 7; Suetonius, *op. cit.*, 27; Dio 58, 11, 5; 60, 32, 1.

² Suetonius, *op. cit.*, 6.

³ Professor Frank limits his criticism to the slight evidence that Gaheis presents in *Real-Encyclopädie* 3, 2781 that Claudius was always regarded "als kaiserliche Prinz." I cannot accept Professor Frank's objections to the interpretation of Gaheis. Detailed refutation of these objections, however, is rendered unnecessary by the additional evidence that has already been presented supporting the view of Gaheis, evidence which Professor Frank did not consider in his article, with the exception of Tacitus 1.54 (=Suetonius, *Claudius* 6).

⁴ For recent more favorable estimates of Claudius as emperor see A. Momigliano, *Claudius The Emperor and his Achievement*, 1934, [in Italian, *L'Opera dell' Imperatore Claudio*, 1932]; and M. P. Charlesworth, *C.A.H.* 10, pp. 667-701.

⁵ See Gaheis, *op. cit.*, 3, 2784 for the evidence on this date. ⁶ *CIL* 3, 381; 5, 24 = Dessau 198.

⁷ Klebs, *Prosopographia* 1, 388, 752; Gaheis, *op. cit.*, 3, 2787; Ferrero in *Dizionario Epigrafico* 2, 295. It might possibly be argued that, if Nero was part of Claudius' name before his consulship, Nero would have appeared somewhere on a stone by error. The improbability of this view is shown, however, by the fact that the praenomen *Imperator*, which Claudius did not assume (Suetonius, *Claudius* 12), but for which there was the precedent of Augustus (Fitzler-Seek in *Real-Encyclopädie* 10, 276; Cicotti in *Dizionario Epigrafico* 1, 917-918), Tiberius (Dessau, indices 3, 1, 262), and Greek usage (in nearly half of even Claudius' Greek dedications this praenomen appears; and see the indices of *IGR* 1, 3, 4 for the Julio-Claudian emperors), appears only twice in the Latin inscriptions of Claudius (*CIL* 3, 7061 = Dessau 217; 8, 26519 [= 1478, 15503] plus *L'Année Épigraphique* 1914, no. 173). Its appearance is easily accounted for in both instances. The presence of *Imperator* on the inscription at Cyzicus is due to the influence of Greek usage. Mommsen (*CIL* ad locum) even preferred, since at that time no other example of the praenomen had been found, to take it as a title of Tiberius, whose name also appears on the stone; wrongly, I think, as the example from Thugga seems to prove. The African inscription on which *Imperator* appears was inscribed on an arch that was originally dedicated to Caligula. His name was erased and that of Claudius substituted before, apparently, the people of Thugga knew that *Imperator* was not part of the official name of Claudius. The arch of Tiberius at Thugga (*L'Année Épigraphique* 1914, no. 172) which reads *Imp. Ti. Caesar* etc. may also have influenced the appearance of *Imperator* on Claudius' arch. In any case, the inscription is certainly of 41 A.D.; see *Nouvelles Archives des Missions* n.s. fasc. 8, 1913, 45-48, no. 35.

the evidence is equally clear. There are altogether 18 inscriptions which are attributable to Claudius before January 25, 41 A.D.¹ Of these, three are actual dedications to Claudius, in which his name appears as Tiberius Claudius Nero Germanicus;² one is a dedication to his second fiancée Livia Medullina Camilla, in which his name also appears as Tiberius Claudius Nero Germanicus;³ thirteen are inscriptions of slaves and a freedman of Claudius, in which only the names Tiberius Claudius Germanicus⁴ or Tiberius Germanicus⁵ appear; and one, in which a certain Tiberius makes a dedication to Iulia Drusilla Germanici Caesaris filia as his *parens*, is extremely doubtful as an inscription of Claudius.⁶

Inscriptions of slaves, however, cannot be expected to give the full name and title of their master or patronus⁷ and therefore have no bearing on the full pre-accessional name of Claudius. The doubtful inscription dedicated to Iulia Drusilla, since only the name Tiberius appears, does not affect the argument either way. Thus only four inscriptions of Claudius that date before his accession, all bearing the name Tiberius Claudius Nero Germanicus, remain to be considered.

Of these, the undated inscription recording a dedication to Medullina Camilli f. Ti Claudi Neronis Germanici sponsa by her paedagogus,⁸ which Professor Frank dismisses by saying that it "may well come from the same period,"⁹ is decisive. Obviously, the theory that Claudius used the name Tiberius Claudius Nero Germanicus only during the period 37–41 A.D. is untenable if it can be shown that Medullina's inscription is datable within a period much earlier than 37 A.D. Suetonius writes that Medullina died on the very day which had been set for her marriage with Claudius.¹⁰ The date of her wedding-day, of course, is not known.¹¹ But it is known that Claudius broke his engagement to Aemilia Lepida in 8 A.D.¹² before he became engaged to Medullina; and that he had two children by Plautia Urgulanilla before divorcing her prior to 20 A.D.¹³ Medullina's inscription may therefore be dated certainly between 8–18 A.D., and almost certainly between 10–12 A.D.¹⁴

¹ This number is taken from Ferrero's article in *Dizionario Epigrafico* 2, 295 which was published in 1900. It is possible therefore that one or two additional inscriptions of this period have been found since then, but if so, they failed to come to my attention while I was recently collecting the dedicatory inscriptions of Claudius for a study of his portraits soon to be published.

² *CIL* 3, 381 (37–41 A.D.); 5, 24 = Dessau 198 (37–41 A.D.), 6416, 10 = Dessau 107, 10 (the inscription at Ticinum). ³ *CIL* 10, 6561 = Dessau 199.

⁴ *CIL* 6, 4376, 4334, 4348, 8740. ⁵ *CIL* 6, 4338, 4340, 4345, 4346, 4356, 4359, 4362, 4363, 14909.

⁶ *CIL* 12, 1026 = Dessau 195. Hirschfeld (*CIL ad locum*) seems to doubt his earlier attribution of this inscription to Claudius (*Wiener Studien* 3, 1881, pp. 266–267). Gaheis (*op. cit.*, 3, 2784) accepts Hirschfeld's identification; Ferrero (*op. cit.*, 2, 295) rightly questions it.

⁷ I cite only a few examples of abbreviations of the names of Augustus, Tiberius, and Claudius that appear on the inscriptions of their slaves or freedmen gathered from *CIL* 6, 2; but the list can be easily extended. Augustus: *CIL* 6, p. 909, 1; Tiberius: *CIL* 6, p. 899, 2 and p. 909, 8; Claudius: *CIL* 6, p. 909, 10, 5239; compare also *CIL* 6, 4412 Caesar ñ s[er].

⁸ *CIL* 10, 6561 = Dessau 199; Fluss in *Real-Encyclopädie* 13, 927–928; *Prosopographia* 2, 292, 213.

⁹ *Classical Quarterly* 2, 1908, p. 91.

¹⁰ Suetonius, *op. cit.*, 26.

¹¹ I have assumed in establishing the date of this inscription that the stone is not anterior to the death of Medullina, but it can, of course, be earlier, since her paedagogus could have made the dedication during her life-time.

¹² *Prosopographia* 12, 71, 419; Fitzler-Scek in *Real-Encyclopädie*, 10, 376 and Gaheis, *Ibid.*, 3, 2785.

¹³ Gaheis, *op. cit.*, 3, 2785. Smilda (*op. cit.*, p. 129) seems to believe that only Drusus was born by 20 A.D.

¹⁴ After having reached this conclusion independently, I find that Smilda (*op. cit.*, 129) concludes that Plautia Urgulanilla was betrothed to Claudius by 12 A.D. because Augustus in the letter to Livia already cited (Suetonius, *Claudius* 4) refers to Urgulanilla's brother as *homine sibi* (Claudius) *affini*.

Thus, even taking the latest possible terminus 18 A.D., we have an inscription in which the name Tiberius Claudius Nero Germanicus appears that can be dated 19 years before Claudius' first consulship. Unless, indeed, it is to be supposed that Medullina's paedagogus waited until 37 A.D. to make a dedication to her memory. Her inscription proves, then, that the name of Claudius as it appears on the arch of Ticinum is not unusual unless attributable to a period 30 years later when Claudius was consul, as Professor Frank believes, for of the four inscriptions that we possess which give Claudius' full name before his accession, two, including *CIL* 5, 6416, 10, are datable many years before his consulship.

Additional evidence that Tiberius Claudius Nero Germanicus was the name which Claudius bore after his name was changed at the adoption of his brother Germanicus¹ into the Julian clan is offered by Dio. In referring to the games given in honor of Drusus by Germanicus and Claudius, to which allusion has already been made, Dio calls Claudius Τιβέριος Κλαύδιος Νέρων.² In a later book he writes of Claudius' accession as follows: Οὕτω μὲν Τιβέριος Κλαύδιος Νέρων Γερμανικὸς, ὁ τοῦ Δροῦσου τοῦ τῆς Λιουίας παιδὸς υἱὸς, τὴν αὐτοκράτορα ἀρχὴν ἔλαβε, μὴ πρὶν ἐν ἡγεμονίᾳ τινὶ τὸ παράπαν ἐξητασμένος, πλὴν ὅτι μόνον ὑπάτευσεν· ἦγε δὲ πεντηκοστὸν ἔτος τῆς ἡλικίας.³ In such a context Dio would hardly have applied this name to Claudius if he had borne it capriciously only for a short period during his consulship and immediately after. Even the statement of Suetonius⁴ that Claudius was originally named Tiberius Claudius Drusus and that he assumed the cognomen Germanicus on his brother's adoption is not necessarily in conflict with the testimony of the formal inscriptions of Claudius and the two passages of Dio. There is always the possibility that Suetonius is not giving the full name of Claudius, just as he does not trouble to give the adoptive name of Caius and Lucius Caesar, Germanicus, Tiberius, and Nero.⁵ Be that as it may, the concordant testimony of the inscriptions and Dio seems to me more trustworthy than the unsupported statement of Suetonius. Smilda is therefore fully justified in believing⁶ that Claudius' original name was Tiberius Claudius Nero Drusus, the ultimate cognomen of which was replaced by Germanicus.⁷ The later disappearance of Nero in favor of Caesar, in the assumption of which Professor Frank sees evidence of Claudius' alleged penchant for capricious appropriation of

¹ Suetonius, *op. cit.*, 2; Tacitus, *Annals*, 1, 3.

² Dio 55, 27, 3.

³ Dio 60, 2, 1.

⁴ Suetonius, *op. cit.*, 2.

⁵ Suetonius, *Augustus* 64; *Tiberius* 15; *Caligula* 1; *Claudius* 27; *Nero* 6.

⁶ Smilda, *op. cit.*, 14.

⁷ This seems better than assuming with Mommsen (*Gesammelte Schriften* 8, 1, p. 100; *Hermes* 13, 1878, p. 262, note 4) and, apparently, Klebs (*Prosopographia*, 1, 389, sub no. 752) that Suetonius has given the full original form of Claudius' name and that the cognomen Drusus was changed to Nero Germanicus. See Vivell (*Chronologisch-kritische Untersuchungen zur Geschichte des Kaisers Claudius*, Diss. Heidelberg, 1911, pp. 49-50) for a third possibility. Mommsen's belief (*op. cit.*, 8, 1, 100), however, that the addition (he writes "change") of Germanicus to Claudius' name was regarded to a certain extent as an adoption does not deserve Professor Frank's characterization "gratuitous." Although the conjecture cannot be pressed too far chronologically, all the evidence bearing on Claudius' status in the imperial family in and about 6-8 A.D. favors the belief that Augustus was trying to groom him for the place in public affairs to which his lineage made him heir. In further support of Mommsen's view I would call attention to the fact that the name of Nero, the son of Germanicus, appears on the arch of Ticinum as Neroni Iulio Germanici [f] Aug pronepot *Caesari*, while that of his younger brother Drusus, who was by birth as much a Caesar as his brother, is inscribed Druso Iulio Germanici f. Aug pronepot *Germanico*. This distinction made in the names of Germanicus' sons is too precisely parallel to the distinction between the names of their father and uncle (Germanico . . . *Caesari* and Ti Claudio . . . *Germanico*), also older and younger brothers, to be fortuitous or without dynastic significance for both generations.

names,¹ is thus perfectly natural, for the name Nero had none of the prestige that had crystallized around the name Germanicus.

Professor Frank's final argument is that the arrangement of the other nine statues on the arch becomes more symmetrical with the exclusion of that of Claudius.² Its exclusion, however, necessitates making the statue of Augustus the central figure of the remaining nine statues, with Nero, Drusus Tiberii filius, Germanicus, and Tiberius on Augustus' right, and Livia, Caius and Lucius Caesar, and Drusus Germanici filius on his left. In Professor Frank's rearrangement Livia, who is not a descendant of Augustus, is placed among their common descendants. The arrangement of the MS tradition, therefore, which makes the parents, Augustus and Livia, the central figures of the monument, flanked on each side by four of their descendants, appears to me to achieve the better balance.³ But the question of greater or lesser symmetry, which perhaps belongs to the non disputandum category, can only be mooted after it has been established that the evidence of the Einsiedeln MS, which is the sole extant source for the inscriptions of Ticinum,⁴ permits the changing of the central pair of statues of Augustus and Livia to the single central statue of Augustus. If it does, it then becomes possible with the support of further evidence to prove that the statue of Claudius is a fifth statue to the left of Augustus, thus rendering the right side of the monument unsymmetrical. Otherwise the exclusion of Claudius' statue leaves only three statues on the left of Augustus and Livia, thus breaking the symmetry of the MS tradition.

A brief review of the tradition of the inscriptions of Ticinum is therefore in order. Their sole source, as has already been said, is the Einsiedeln MS (no. 328). There they appear as three inscriptions (nn. 78-80),⁵ not ten. Mommsen⁶ was the first successfully to restore the three Einsiedeln inscriptions as ten inscriptions recording

¹ *Classical Quarterly* 2, 1908, p. 92. But this cannot be meant seriously: for how could Claudius, in terms of imperial administration, even though not actually a member of the gens Julia, avoid taking the name Caesar, associated domi militiaeque with the wielder of supreme power for more than twenty years before the title Augustus was created?

² The incorrectness of the restoration of *IGR* 3, 312, which Professor Frank cites in support of his argument that greater symmetry of arrangement is secured on the arch of Ticinum by excluding the inscription of Claudius, has recently been demonstrated by the editors of volume 4 (no. 143) of *Monumenta Asiae Minoris Antiqua*. The inscription belongs to a pedestal, not an Augusteum (Mommsen, *Res Gestae* 2 X), originally surmounted by only five statues (Germanicus, Tiberius, Augustus, Livia, and Drusus), not seven. The elimination of C. and L. Caesar and the strong probability that the pedestal is to be dated 14-19 A.D. render the monument completely valueless as evidence for the attitude of Augustus toward Claudius in 7-8 A.D.

³ Gardthausen, (*op. cit.*, I, 3, 1257), who also thinks that Augustus and Livia were the central figures, believes that Tiberius and Germanicus were on the left and right of Augustus, with their sons next to them. He does not indicate where the statues of C. and L. Caesar and Claudius were placed. His arrangement, however, fails to take into consideration the transcriber's method of copying the inscriptions (see note 2, p. 320), which cannot be reconciled to Gardthausen's suggested arrangement of the statues. For that matter, Germanicus himself was the adopted son of Tiberius and should, therefore, according to Gardthausen, be placed next to Tiberius, precisely where he appears in the MS, rather than next to Augustus.

⁴ De Rossi, *Inscriptiones Christianae Urbis Romae* 2, 1, 32 ad 78-80.

⁵ De Rossi, *loc. cit.*; *CIL* 6, IX and XV, which gives the numbers of Maibillon's edition 76, 77, 78: Huel-sen, *La Pianta di Roma*, who gives a photographic facsimile of the inscriptions of Ticinum (Pl. I f, 78-79). De Rossi warns his reader (*op. cit.*, 2, 1, 9) that the edition of Hänel (*Archiv für Philologie und Pädagogik* 5, 1837, 115-138), which is used by the editors of *CIL* 6, 1 (among them De Rossi himself), inaccurately reproduces the actual text and punctuation of the Einsiedeln MS. It is also to be noted that in Mommsen's *Gesammelte Schriften* (8, 1, 94) LXXXVIII is erroneously given for LXXVIII.

⁶ *Op. cit.*, 8, 1, 93-100; *CIL* 5, 6416.

dedications to the family of Augustus set up on an arch at Ticinum. The transcriber, whose epigraphical competence cannot be questioned,¹ copied them from left to right as he read across instead of down the columns of the inscriptions, with notations, however, to indicate which words belonged to each separate column.² The

¹ Mommsen, *Gesammelte Schriften* 8, 1, 66; De Rossi, *op. cit.*, 2, 1, 15, 19; 17, 22; 32 ad nn. 78–80.

² Mommsen (*op. cit.*, 8, 1, 96) was the first to point out that the transcriber copied the inscriptions of the arch from left to right. Speaking generally of the Einsiedeln epigraphical collection (8, 1, 66) he says that one cannot expect to find the division of lines preserved in the MS. I believe, however, that this view will not hold for the inscriptions of the arch of Ticinum. By rearranging the horizontal lines of the MS into the vertical columns in which the inscriptions appeared on the arch, while retaining the punctuation of the MS, it becomes possible to show that the dots that appear between words in the MS were not entered arbitrarily by the transcriber. The three inscriptions of the Einsiedeln MS appear as follows in Huelsen's facsimile (see note 5, p. 319):

Neroni iulio. d. f. germa IN PORTA PAPIA
nico. ti. caesari germanici augusti nepoti
iulio. ti. f. augusti. f. aug. pronepoti. divi
./ . augusti nepot. divi nepot. pont. caesari.
pron. caesari. ./ . pontifici. divi pron. caesari. cos. ter.
imp. ter. augurique tribuniciae potestatis. viii.
Imp. caesari livia. i. divi. f. augusto ITEM IBI
drusi. f. pontific. maximo. uxori caesaris aug. cos.
iii. imp. iii. tribuniciae pot. viii. patri patriae aug
xv. vir. s. f. vii. vir epulon. cos. xiii. imp. xvii.
tribunic. potest. xxx. IT IBI Caesari. i. caesari
druso. iulio. ti. claudio. augusti. f. augusti. f.
germanici. f. drusi germanici. f. divi nepot.
divi nepot. aug. pronepot. neroni germa
nico. pontific. cos. auguri. cos. design. ger
manico imperatori principi iuventutis.

Rearranged they appear thus:

Neroni iulio.	d. f.	germanico	ti. caesari
germanici	augusti nepoti	iulio. ti. f.	augusti. f.
aug. pronepoti.	divi pron. caesari.	augusti nepot.	divi nepot. pont.
caesari.	pontifici.	divi pron. caesari.	cos. ter. imp. ter.
		augurique	tribuniciae pot. viii.
Imp. caesari			livia. i.
divi. f. augusto			drusi. f.
pontific. maximo.			uxori caesaris aug.
patri patriae aug xv. vir. s. f. vii. vir epulon.			
cos. xiii. imp. xvii. tribunic. potest. xxx.			
caesari.	i. caesari	druso. iulio.	ti. claudio.
augusti. f.	augusti. f.	germanici. f.	drusi germanici. f.
divi nepot.	divi nepot.	aug. pronepot.	neroni germanico.
pontific. cos.	auguri. cos. design.	germanico	
imperatoris	principis iuventutis.		

Of the resulting 43 lines (accepting Seek's improved rearrangement of Mommsen's restoration of the inscriptions of Germanicus and Tiberius which I have reproduced above [*Gesammelte Schriften* 8, 1, 94, note 3]), only nine lines end without a dot. A glance at almost any page of the *CIL* or Diehl's *Inscriptiones Latinae* (see Pl. 26 particularly) will show that the one place in a Latin inscription in which a dot does not appear regularly is at the end of a line. On the other hand, of the 35 instances in which a dot appears between words in a line only three follow unabbreviated words that are not themselves followed by a single letter abbreviation. In other words, a dot is rare within a line between unabbreviated words, which on the stones is precisely where it does generally appear. If allowance is made for unintentional transpositions and omissions of dots by copyists, which those who have had occasion

confusion in the Einsiedeln MS is the work of the copyists to whose successive efforts we owe the extant collection.¹

Exactly how the copyists came to make the tripartite division preserved in the Einsiedeln MS cannot be established with certainty. But it is evident that the division into three inscriptions was caused by some form of differentiation on the monument between the inscriptions of Augustus and Livia and the other eight. Again there can be no absolute certainty concerning the precise form which this differentiation took. I believe, however, that most probably the transcriber found the inscriptions of Augustus and Livia inscribed upon a central base raised above the level on which the other eight statues stood upon the arch. The dynastic and architectural advantage of such a base for the statues of Augustus and Livia is obvious.² It secured to the emperor and his wife the prominence on the monument that their rank demanded and prevented the monotonous effect that ten statues in one unbroken line would have produced.³ In all probability the size of the page of the medieval epigraphist was not large enough to permit him conveniently to copy all ten inscriptions in a single row.⁴ If this can be granted, it seems likely that he resolved the

to check their own transcriptions from stones or the *CIL* will be the most prepared to make, it seems clear that the transcriber used dots after abbreviated words and at the ends of the vertical columns to mark their separation as he read across them horizontally. The dot that separates seven unabbreviated masculine names in the genitive singular (except for *livia. i.*) from *f. (ilius; except for the i. of the exception just given)* seems to have been intended as an aid to the scribe in differentiating *-if* from the dative-ablative plural *-is* ending which it closely resembles. (For the similarity of the Einsiedeln minuscule *f* and *l* see Huelsen, *La Pianta di Roma* Pl. 1 f, 78-79.)

¹ De Rossi (*op. cit.*, 2, 1, 15, 19; 16, 20, 21; 17, 22; and 32 ad nn. 78-80) has shown that the Einsiedeln collection is not merely one remove back from the transcriber's note-book as Mommsen (*op. cit.*, 8, 1, 65) thought, but that it has a MS tradition which in some parts of the collection goes back several centuries before the Einsiedeln MS was written.

² The arch of Orange and the copies of arches on coins, which on this point are better evidence than the extant arches, show that the central group dominated the other figures. Of the numerous recent studies on the arch and its origin Noack's article (*Vorträge der kulturwissenschaftliche Bibliothek Warburg* 1925-1926, pp. 147-201) has the completest appendix of photographs and drawings of extant arches and a plate of coin reproductions of arches (Plates 1-28). See also Plate 94 of the *Tafelband* of Bernhart's *Handbuch zur Münzkunde der Römischen Kaiserzeit* and pages 132-134 of the text.

³ Mommsen (*op. cit.*, 8, 1, 96) argues from the fact that part of no. 4 (Tiberius' inscription) appears in no. 5 (Augustus' inscription) that all ten statues stood in a single row: otherwise the transcriber would not have made the error. But this seems incorrect. De Rossi has shown (see note 1, *supra*) that the compiler of the Einsiedeln MS was much further removed from the original transcription than Mommsen thought. This means that dittographic errors are at least as attributable to later copyists as to the transcriber of the stones. The dittography in Augustus' inscription, however, is unmistakably that of a later scribe, not that of the transcriber. Mommsen himself noted that when the words were repeated in no. 5 the word *augurique* is absent. But he failed to note further that in no. 4 the lines in question are given as *cos. ter. imp. ter. augurique tribuniciae potestatis viii.*, while in no. 5 they appear as *cos. iii. imp. iii. tribuniciae pot. viii.* That is, in the repetition the consular and imperial adverbial ordinals are given as cardinal numerals, and *potestatis* is abbreviated to *pot.*, besides the omission of *augurique*. Obviously, if the transcriber had lost his place in the line (actually he would have been obliged to lose his place twice, since on the stone the repeated words formed the last two lines of Tiberius' inscription as Seek has shown [see note 2, p. 320]), *augurique* would not have dropped out, the adverbial ordinals would not have become cardinal numerals, or *potestatis* become abbreviated to *pot.* when he saw them the second time. The repetition must therefore be attributed to a scribe who incorrectly entered a gloss or a variant reading which he found in his copy. Consequently the repeated lines do not prove that the statues stood on the arch in a straight line, which, as has been shown, is unlikely for other reasons.

⁴ In *CIL* (5, 6416) they extend across a double page. De Rossi (*op. cit.*, 2, 1, 32 ad 78-80) says that

difficulty, to the confusion of later copyists of his note-book, by copying them on the same page or consecutive pages in the natural groupings of the monument with a notation, which still appears in the Einsiedeln MS, that they all belonged to the same arch.

But, however the tripartite division of the ten inscriptions preserved in the Einsiedeln MS came to be made by the copyists, the form which this division took seems to me clearly to indicate that Augustus and Livia were the central figures on the arch, not Augustus alone. For if Livia's statue had been grouped originally with those of C. Caesar, L. Caesar, and Drusus Germanici filius before the alleged addition of Claudius' statue destroyed the symmetry of the whole group, the transcriber's method of copying make it almost certain that he would have read Augustus' inscription separately and his third group as *Livia i caesari i caesari druso iulio ti claudio augusti f augusti f* etc.¹

Whether this assumption is correct or not, there is no evidence of crowding in the third group (no. 80) as Professor Frank believes.² All three inscriptions of the Einsiedeln MS appear with precisely the same interpunctuation.³ If it is held that crowding on the right side of the arch led to reading the last four inscriptions as one, the same crowding must be posited for the left side: for in the MS the first four inscriptions appear as one inscription also.

To summarize: I believe that I have shown that the postulate that Claudius was so despised by his relatives in 7/8 A.D. as to be excluded from the imperial family is in serious conflict with the evidence; that the assumption that Claudius used the name Tiberius Claudius Nero Germanicus only in 37 A.D. and immediately after, which is the keystone of Professor Frank's argument, is untenable; that the MS tradition of the inscriptions will not permit making the statue of Augustus the sole central figure; and that therefore the inscription of Claudius on the arch of Ticinum still remains the earliest of his dated inscriptions which we possess.

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in the archetype of the Einsiedeln MS the three inscriptions appeared in horizontal rather than vertical juxtaposition. He cites no specific evidence for the statement, however, and the only possible support for this view that I can discover, the position of IN PORTA PAPIA, ITEM IBI, and IT IBI, hardly bears this interpretation.

¹ See note 2, p. 320, for the Einsiedeln text.

² *Classical Quarterly* 2, 1908, p. 92, note 1: . . . "the later addition of Claudius' statue at one end may account for the crowding that misled the anonymous Einsiedler into confusing the *tituli* as he did, reading the last four as one; cf. *C.I.L.* vi., p. xv."

³ See note 2, p. 320, for the Einsiedeln text.

THE SITE OF SODOM AND GOMORRAH

DIVERSITY OF VIEWS

THE question of the precise location of the "Five Cities of the Plain," of which the more notorious were Sodom and Gomorrah, has attracted attention from Bible scholars and Palestine travellers for centuries. Nearly seventy years ago Walcott, in an able article, wrote ¹ that "There is no site, ancient or modern, which combines all the elements of interest that belong to the site of Sodom and the other 'cities of the plain' whose destruction is recorded in the Book of Genesis." The Moslems placed the location beneath the waters of Dead Sea "Lake Asphaltites," "Salt Sea," or "Bahr Lut" — the Sea of Lot — as it has been called at various times), and Robinson adopted this as his general view,² but other writers supposed the site to be on the adjoining land at the Sea's south end. In contrast to these opinions, some authorities ³ have postulated the position of the settlements in question as being north of that Sea in the plain of the River Jordan.

The Crusaders appear to have been convinced that the site of these towns lay south of the Dead Sea ⁴ and assumed the name Sodom to be synonymous with Usdum, and Zoar with Zuweira. Walcott was perhaps the first modern writer to back Strabo's declaration that the country containing the cities, "the capital of which was Sodom," lay near Masada (*Judea*, iii, 183), the site of which "is unquestioned," so that "this compels its location in the southern part of the valley."

Since the present writer is unable to accept any position farther north than El Lisan Peninsula, his article is an effort to clarify the matter by introducing additional evidence derived from personal inspections of the region in 1929 and 1934, reinforced by historical and geographical researches.

TOPOGRAPHIC AND GEOLOGIC CHARACTERISTICS OF THE DEAD SEA AREA

The physical condition of the Dead Sea is as unique as that of any part of the world. This body of water, the surface of which lies 393 meters (1292 ft.) and the greatest abyss 875 meters (2882 ft.) below Mediterranean level, fills the deepest hollow in a rift or ramp valley⁵ (*graben*), 360 klm. (225 miles) long, extending from Lake

¹ Samuel Walcott, "The Site of Sodom," *Bibliotheca Sacra*, 25, 1868, pp. 112-51.

² Edward Robinson, Eli Smith, et al.: *Biblical Researches in Palestine and the Adjacent Regions; A Journal of Travels in the Years 1838 and 1852*, 2nd ed., London, 1856, Vol. 2, p. 604.

³ George Grove, in Smith's *Dictionary of the Bible*, under "The Salt Sea," "The Vale of Siddim," "Sodom" and "Zoar"; R. D. Stewart, *The Land of Israel*, New York and Toronto, 1899, pp. 279-90; Selah Merrill, *East of the Jordan*, New York, 1883, p. 549.

⁴ C. R. Condor, *Tent Work in Palestine*, New York, 1878, p. 13.

⁵ The precise geologic term to be employed is debated by geologists. The designation "rift" was invented by Gregory for the Dead Sea as well as similar *grabens* bounded by East African faults. Willis, however, in postulating certain genetics of these features, which practically reversed the views of Gregory, proposed the term "ramp." A full discussion of the relative merits of the two hypotheses and terms is contained in J. W. Gregory's *The Rift Valleys and Geology of East Africa, an Account of the Origin and History of the Rift Valley of East Africa*, 1921, and the opposing views in Bailey Willis' "Dead Sea Problem: Rift Valley or Ramp Valley," *Bull. Geol. Soc. America*, 39, 1928, pp. 490-542, pls. 14-18.

Tiberias south to the junction of the Gulf of Akaba and the Red Sea. The breadth of this *graben*, which was formed in the Pliocene and Recent epochs, ranges from 8 miles, near the head of the Dead Sea, to 16 miles at Jericho.



FIG. 1.—FOLDING ADJOINING A FAULT IN CRETACEOUS LIMESTONE AND INTERSTRATIFIED BOSS, BETWEEN ES SALT AND AMMAN

The general geologic features have long been known. Hull¹ explained that the strata east of the depression are "relatively elevated, or (in other words) those on the west side relatively lowered" by faulting, the existence of which had previously been recognized by Hitchcock,² Tristram,³ Wilson⁴ and Lartet⁵ from the Jordan to the Gulf of Akaba. The fault planes enclosing the *graben* are not simple ones; neither are they generally vertical and they are not normal faults.⁶ Displacements underlie the valley as well as the highlands. Major faults do not extend throughout the entire length of the Dead Sea as continuous bounding planes, but they coincide with a mountain wall for a few miles, then curve off into the Sea or into the highlands as the case may be, *en échelon* fashion. Yet physical consistency in all parts of the *graben* is so great that some fundamental cause doubtless explains the tectonic habit.

Faults exist aside from those affecting the Dead Sea *graben* itself as any geologist

¹ Edward Hull, *Mount Seir, Sinai and Western Palestine*, London, 1885.

² Edward Hitchcock, "Notes on the Geology of Several Parts of Western Asia; Founded Chiefly on Specimens and Descriptions from American Missionaries," *Trans. Assoc. Amer. Geologists*, 1840-1842, pp. 348-421.

³ H. D. Tristram, *The Land of Moab*, New York, 1873, 2nd ed., p. 329.

⁴ Article entitled "Arabe" in Smith's *Dictionary of the Bible*.

⁵ Louis Lartet, Volume III of the Duc de Luynes' "Voyage d'Exploration à la Mer Morte, à Petra et sur la Rive Gauche du Jourdain," Paris, 1874.

⁶ It was partly the direction of fault hade that led Willis to differ from Gregory as to the nature of the Dead Sea depression. Willis has declared that the faults represent thrust planes inclined downward away from the *graben*, whereas Gregory believed them to be normal faults. The problem is a geologic rather than a geographic one and space forbids its attempted solution in a paper of this sort. The present writer, however, has found much in the hade and distribution of bounding faults that tends to confirm the view of Willis.

can see in casual travel through the valley of the Yarmuk River between El-Ham-meh and Lake Tiberias, along the Amman highway near Es Salt (Fig. 1), several miles northeast of Nablus, or in crossing Zerqa Ma'in (a canyon-like valley east of the Dead Sea) 5 km. (3 miles) above its mouth. Blanckenhorn¹ and Blake,² in delineating Palestinian geology, showed the trend of a pertinent fault which intercepts hills of Cretaceous age on the west side of the south end of Dead Sea. Anticlines and domes likewise exist, the structural geology of Palestine and western Transjordan being largely an alternation of anticlines and synclines.³ Some of the sharper folds grade into faults and some of the last-named are flanked by anticlines. Several axes extend diagonally across the great valley from Palestine into Transjordan. In fact, a perfect grid of structures exists—including one system formed possibly in early Tertiary time, but later cut by the north-south "rift" or "ramp" with its accompanying tectonic phenomena.



FIG. 2.—ROCK FOLDING BETWEEN JERUSALEM AND DEAD SEA

(Photo by Joseph C. Hill)

Near the south end, the continuity of the Dead Sea is half broken by a peninsula—El Lisan—rising 50 to 140 feet above water level, which politically and geographically belongs to the kingdom of Transjordan and of which the land surface appears to be of Quaternary and Pliocene ages. South of this interruption, systematic soundings made by Lynch⁴ proved the water to be only 2 to 6 meters deep (6 to 18 ft.), whence is derived a possibility that the embayment may have been land until very recent and possibly historical times.

The sharp topographic relief lends enchantment to a drive from Jerusalem to the head of the Dead Sea, 6 miles south of Jericho, along which the highway descends some 1200 meters (say 4000 ft.) in altitude (Fig. 2). Hilltops in the vicinity of Jerusalem, Hebron, Amman and Kerak, from 750 to 1150 meters (or 2500 to 3800 ft.) above the Mediterranean Sea, form a peneplain level that truncates the Jerusa-

¹ Max Blanckenhorn, *Naturwissenschaftliche Studien am Toten Meer und in Jordantal*, Berlin, 1912.

² George S. Blake, *Geology and Water Resources of Palestine*, Jerusalem, 1928.

³ F. Julius Fohs, "Geology and the Petroleum and Natural Gas Possibilities of Palestine and the Siniatic Peninsula," *Bull. Am. Assoc. Petrol. Geologists*, 11, 1927, pp. 135-49.

⁴ W. F. Lynch, *Narrative of the United States' Expedition to the River Jordan and the Dead Sea*, Philadelphia, 1849.

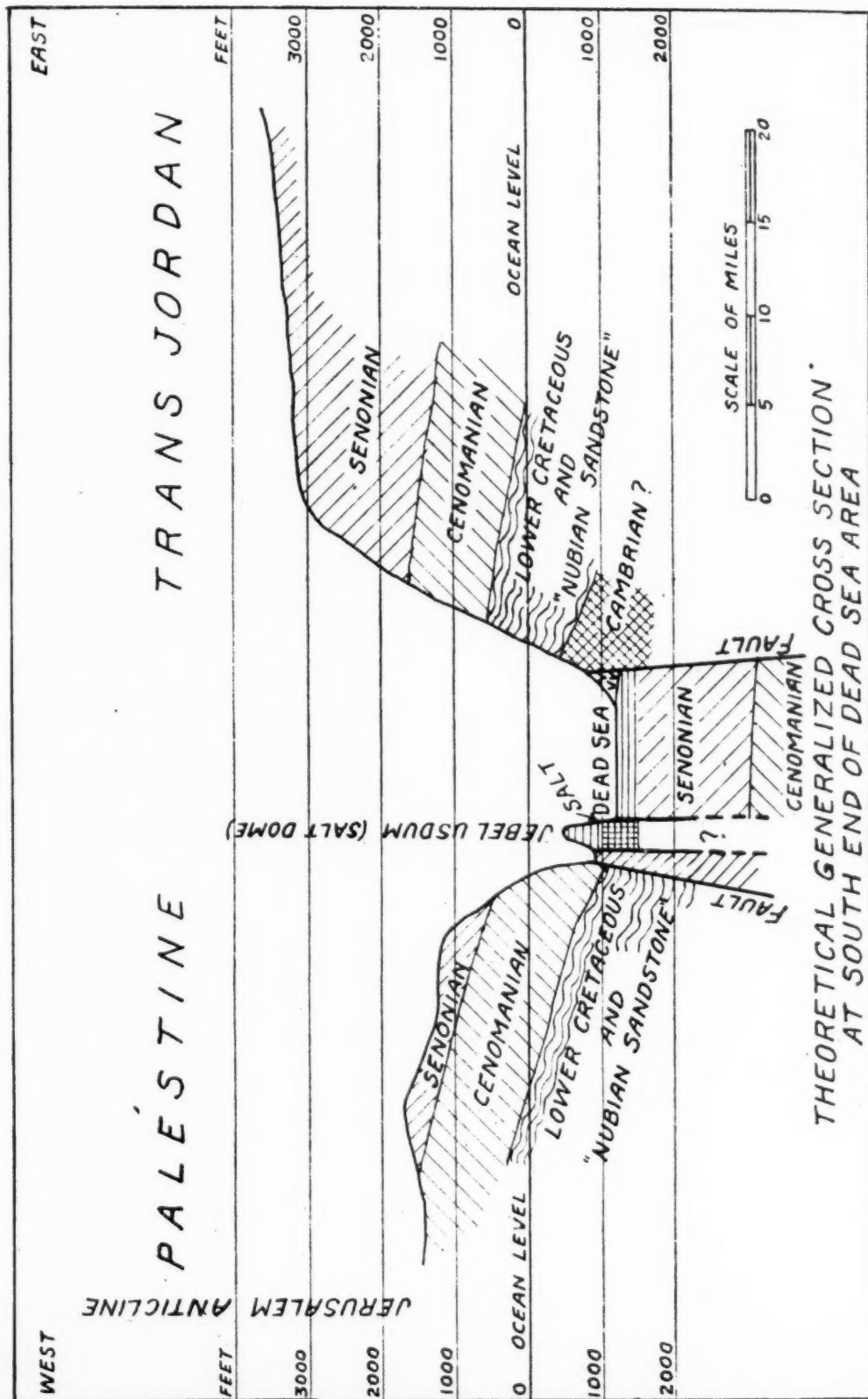


FIG. 3.—TOPOGRAPHY AND GEOLOGY OF THE SODOM AREA AS EVINCED BY A CROSS SECTION

lem, Es Salt and other anticlines. Yet deep gorges, miles in length, intersect this plateau, and the Arnon (Wadi el-Mojib), Zerqa Ma'in and a few others have impregnable walls. These streams carry plentiful supplies of fresh water, although Zerqa Ma'in is warm, even where it enters the Dead Sea, owing to the presence of Hamman ez-Zerqa (Zerqa Hot Springs or baths) in the lateral valley, 5 klm. (3 miles) inland.

In studying an east-west cross section near the south end of the Dead Sea, one is impressed by a sharp drop in elevation that takes place from the Kornub and Ras Zuweira plains at altitudes of 600 meters (about 2000 ft.) and 630 meters (or 2100 ft.) down to water level at minus 393 meters (1292 ft.) (see Fig. 3). Similarly, the Transjordan topography descends from plus 950 meters (nearly 3200 ft.) to minus 360 meters (1214 ft.) in passing from Kerak to the uppermost land on El Lisan.

Although the mountain walls rise abruptly 700 to 1100 meters (say 2400 to 3700 ft.) on the east side and 500 to 950 meters (approximately 1600 to 3100 ft.) on the west side, this is not true at the north and south ends of the Sea. The River Jordan descending from 202 meters (666 ft.) below ocean level at Lake Tiberias to 393 meters (1292 ft.) below ocean level at the Dead Sea, flows in a U-shaped valley, broken by clay hills which are in places fully 100 meters (or 330 feet) above the Dead Sea level; yet the land immediately surrounding the mouth of Jordan is comparatively flat (Fig. 4).

"Ghor" is the name of the valley that extends 105 klm. (65 miles) south from Lake Tiberias. The general land surface of this depression is composed of Tertiary and Quaternary sediments; but in a few places, as between Jericho and Beisan (Beth Shan), domes (or hemi-domes) of Cretaceous limestones, sometimes faulted, can be seen far out in the valley. Similarly, although post-Tertiary sediments cap El Lisan and adjoin the eastern and western hills at the south end of the Sea, the country thereabouts is mainly flat. This "southern Ghor" is, in wet weather, impassible, and considerable areas consist of swampy and drowned land, where trunks of dead trees stand erect.

Modern writers occasionally include the Southern Ghor as part of the Jordan Valley, and Old Testament chroniclers may have been in a similar habit when referring to "the Valley of the Jordan."¹ The southern extension of the Southern Ghor is Wadi Arabah, formerly part of the "wilderness of Zin," important in Israelite history.

DESCRIPTION OF JEBEL USDUM

From a geologic standpoint, the most interesting Dead Sea structure (Fig. 5) is Jebel Usdum, sometimes known as the "mount of Sodom," a hill 8 klm. (5 miles) long and 4.5 klm. (3 miles) wide, composed to a considerable extent of rock salt, rising 234 meters (742 ft.) above water level, but nevertheless standing 159 meters (550 ft.) short of the Mediterranean surface (Figs. 3-11).

Jebel Usdum was perhaps first described geologically by Hitchcock,² although

¹ Some investigators have tried to prove that the Dead Sea did not exist before the time of the destruction of Sodom and Gomorrah, but that the Jordan flowed south into the Gulf of Akaba. The recent study found no evidence to sustain such a view.

² Edward Hitchcock, *op. cit.*, p. 368.

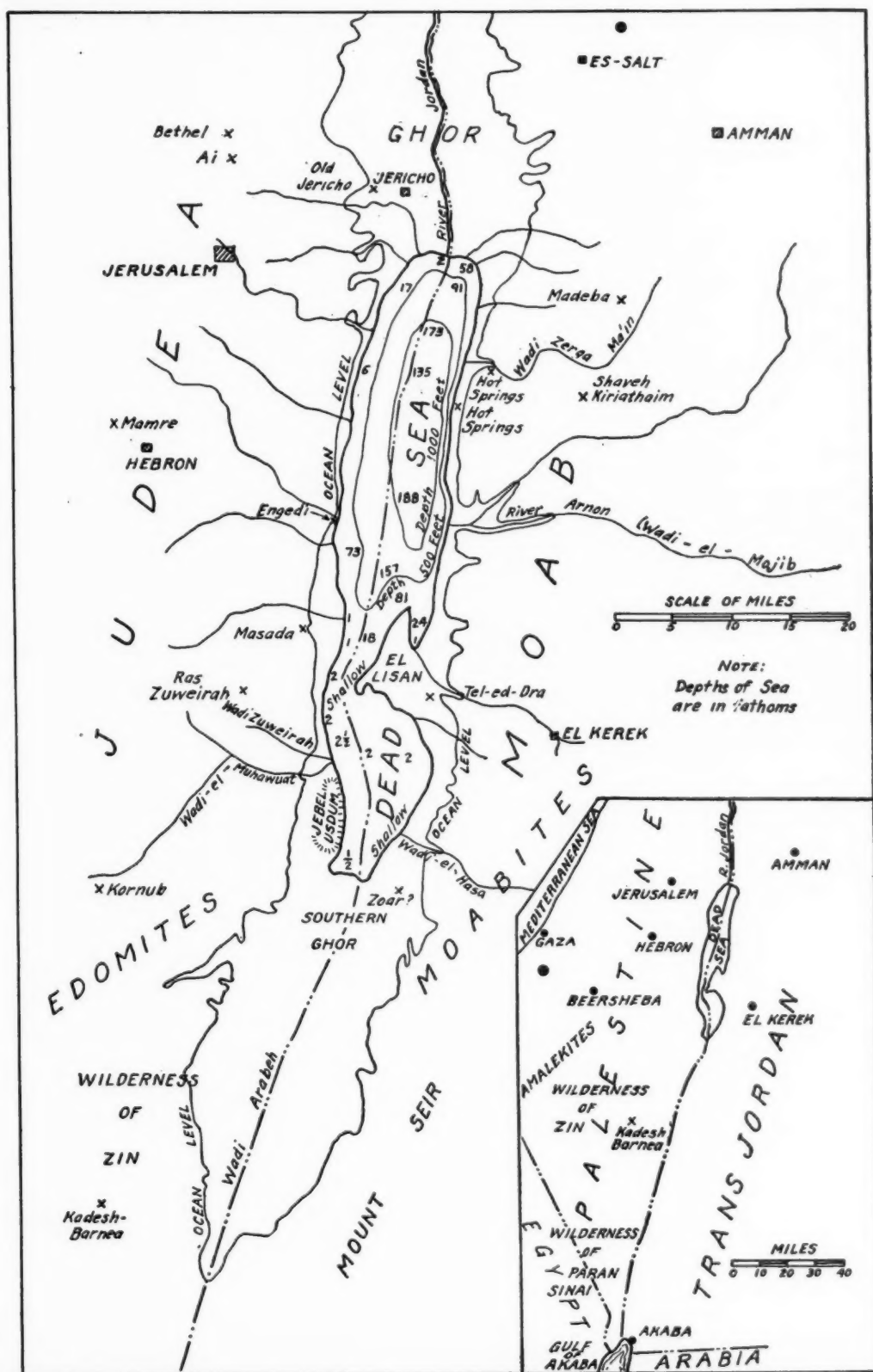


FIG. 4.—SKETCH MAP OF DEAD SEA AREA SHOWING SOUNDINGS

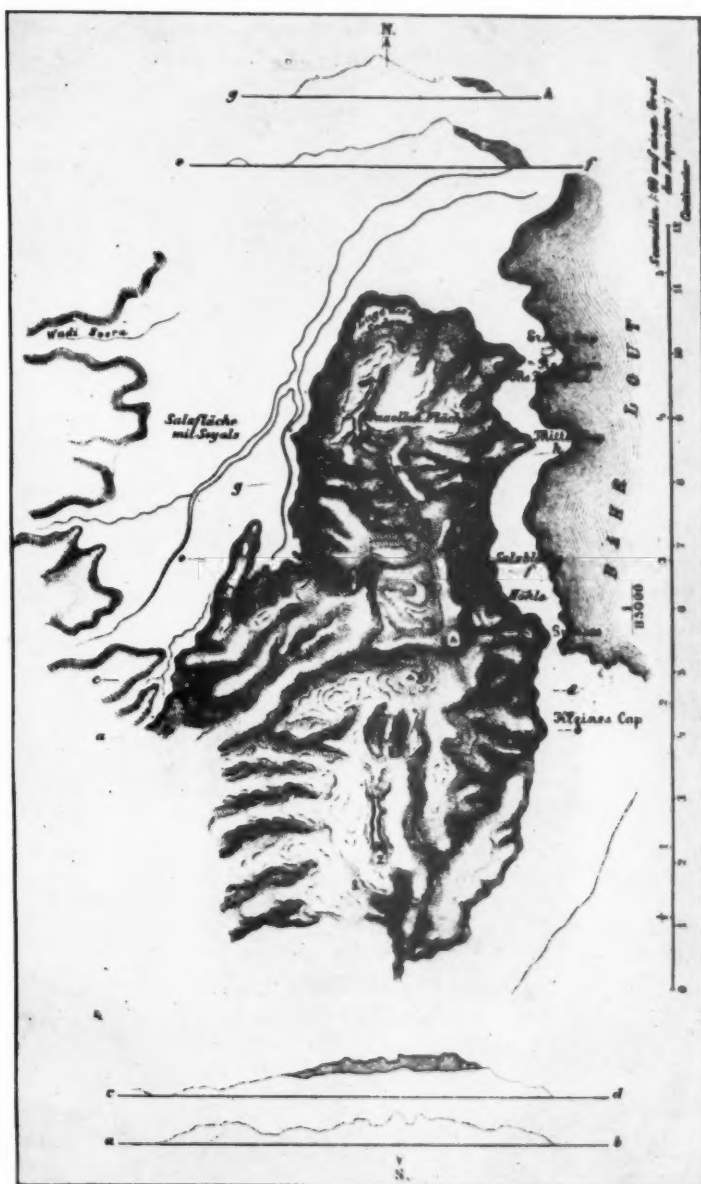


FIG. 5.—MAP OF JEBEL USDUM

(From Mittheilungen der geographischen Gesellschaft in Wien, Bd. XVI, N.F. VI)



FIG. 6.—JEBEL USDUM



FIG. 7.—SALT CLIFFS ON EAST COAST OF JEBEL USDUM



FIG. 8.—COAST OF JEBEL USDUM
(Photo by D. A. Sutherland)

more than forty years later Hull wrote ¹ that "for the first time the upper surface of this remarkable saliferous plateau was examined by a European." The mountain is not composed entirely of salt, as might be inferred from reading some accounts, but is a pure compact crystalline salt mass ("white to gray and in places black, with pegmatite-like veins") over 30 meters (or 100 ft.) thick in some parts. The salt is deeply eroded, caverned and creviced. The remainder of the hill is largely composed of late Tertiary or Pleistocene marly and gypseo-argillaceous strata. Overlying beds are largely limestone "cap-rock," but shales and sands associated with the salt are in places highly inclined. Anderson explained that the formations on Jebel Usdum, or "Khashm Usdom," as he called the hill,² had rock-salt only in the lower portion and no crystallized salt was found more than 100 feet above the level of the Sea.

The hill was more recently described by Wyllie ³ and Lees,⁴ the second of whom explains that direct evidence of the age of the Jebel Usdum salt is lacking. The salt intrudes in the Jebel Usdum series and is, therefore, older than any exposed rocks. He tells us that the age of the salt intrusion really is post-Usdum series and, therefore, falls within the time of the faulting. The latest movement appears to fall within historic time, and he speculates whether the story of Sodom and Gomorrah may not have been in some way connected with the movement of the salt dome.

THE "PILLAR OF SALT"

It is not strange that the superstitious Israelites evolved a legend according to which Lot's wife was changed miraculously into a pillar of salt, for salt pillars have existed within a few years on the seaward coast of Jebel Usdum even if they do not still stand there (Fig. 9). Lynch wrote ⁵ that when sailing southward parallel with this mountain, —

"to our astonishment, we saw on the eastern side of Usdum, one third of the distance from its north extreme, a lofty, round pillar, standing apparently detached from the general mass. . . . We found



FIG. 9.—PILLAR OF SALT ON JEBEL USDUM
(Photograph by American Colony Stores, Jerusalem)

¹ Edward Hull, *op. cit.*, p. 129.

² H. J. Anderson, "Geological Reconnaissance of Part of Holy Land", in W. F. Lynch's, *Official Report of the United States' Expedition to Explore the Dead Sea and the River Jordan*, Baltimore, 1852.

³ B. K. N. Wyllie, "The Geology of Jebel Usdum, Dead Sea," *Geol. Mag.*, 68, No. 606, 1931, pp. 360-72, 4 figs. and 1 pl.

⁴ G. M. Lees, "Salt—Some Depositional and Deformational Problems," *Trans. Instn. of Petrol. Technologists*, 17, No. 91, 1931, pp. 259-80; pp. 265-8.

⁵ "Narrative," etc., *op. cit.*, p. 307.

the pillar to be of solid salt, capped with carbonate of lime, cylindrical in front and pyramidal behind. The upper or rounded part is about forty feet high, resting on a kind of oval pedestal, from forty to sixty feet above the level of the sea. It slightly decreases in size upwards, crumbles at the top, and is one entire mass of crystallization. . . . Its peculiar shape is doubtless attributable to the action of the winter rains. . . ."

A similar pillar is mentioned by the historian Josephus, who must actually have believed the story of the woman's transformation into salt, for he adds:¹ "I have seen it, and it remains at this day."

Clement of Rome, a contemporary of Josephus, also mentions this pillar; likewise Irenaeus, a writer of the second century, who, yet more superstitious than the other two, adds the hypothesis how it came to last so long with all its members entire.²

Montague was evidently as superstitiously inclined as the natives on seeing³ "an immense column, rounded and turret shaped, facing toward the southeast," which, he was told, was "the pillar of salt, in which Lot's wife was encased." He ascertains it to be

"sixty feet in height, and forty feet in circumference. We cannot suppose that Lot's wife was a person so large that her dimensions equalled those of this column . . . really of solid rock salt, one entire mass of crystallization. . . . It appears to be the only one of its kind here. . . . My own opinion on the matter is, that Lot's wife having lingered behind in disobedience to the express command of God—given in order to ensure her safety—that while so lingering she became overwhelmed in the descending fluid, and formed the model or foundation for this extraordinary column."

It seems strange that so many observers supposed brine to have descended from above.

Aside from the fact that we do not require absolute credentials for the identity of every natural object of legendary origin, it seems improbable, to judge by the column's geologic position and its form, that only a single pillar existed approximately for 4000 years on a precipitous hillside in an earthquake region. It is more likely that sometimes one mass, sometimes another, was called "Lot's wife" during intervening millennia.⁴

In a later decade, Blanckenhorn⁵ described Jebel Usdum as well as some asphalt-bearing gravels not far away in Wadi Mahawuat. Mr. David A. Sutherland, in a personal letter to the writer, dated Nov. 28, 1933, mentions a "salt cave which has a vertical chimney" to the air, about 150 feet above, where the air was "positively chilly" at night and his party "had to shelter with big rocks at our backs not to shiver with cold," although outside the day-time "temperature was 115° F. in the shade." A tunnel-like cave was also noticed by Wyllie.⁶

¹ Flavius Josephus, *Antiquities of the Jews*, I, Chapter XI.

² Lynch, *op. cit.*

³ Edward P. Montague, *Narrative of the Late Expedition to the Dead Sea*, Philadelphia, 1849, pp. 200-2.

⁴ Wyllie tells us, in picturing a pillar called "Lot's Wife," in gypseous marl overlying the salt (*op. cit.*, footnote on p. 369): "A stronger tradition seems to attach Lot's name to pinnacles of calc-sinter which have been formed along the eastern rift-fault, on the Transjordan side, some distance south of Wadi Mojib. These are called Mart Lut, Bint Lut, and Kelb Lut (Lot's Wife, Daughter and Dog)."

⁵ *Op. cit.*, pp. 111-21.

⁶ *Op. cit.*, p. 369.

THE SCRIPTURAL RECORD

In order to visualize the historical record, a few Biblical statements must be reviewed. The first reference to any of the cities of the plain is in *Genesis* x, 19, defining the boundaries of the Canaanite nation as extending "from Sidon, as thou comest to Gerar, unto Gaza; as thou goest unto Sodom and Gomorrah and Admah and Zeboiim, unto Lasha." It is evident that, if the five settlements lay at the north end of the Dead Sea, this description would be meaningless. On the other hand,



FIG. 10.—ROCK SALT CLIFFS ON JEBEL USDUM
(Photo by D. A. Sutherland)



FIG. 11.—SOLID ROCK SALT CLIFFS ON EAST
SIDE OF JEBEL USDUM

if they stood at the south end, the west and south boundaries described in the text may be more readily visualized as extending south from Sidon along the Mediterranean to Gaza, thence east past Sodom and Gomorrah, to Lasha.¹

After Abraham and Lot with their families had returned from Egypt to Bethel and Hai (Ai), 10 miles north of the present Jerusalem (*Gen.* xiii, 3), a division of the country was made between them. The context (*Gen.* xiii, 10) indicates that the patriarch could look from Bethel due east into the well-watered Jordan valley, which Lot chose as his domain, accordingly journeying east (*Gen.* xiii, 12) to "the cities of the Plain, and moved his tent as far as Sodom." Abraham at the same time moved south to a new home at "the oaks of Mamre, which are in Hebron."

¹ According to Josephus (Chapter 9) Assyria was the governing power, which "imposed a tribute upon the Sodomites, who submitted to this slavery twelve years."

The narrative then relates how five Elamite kings arrived (*Gen.* xiv, 4) and "made war with Bera, king of Sodom, and with Birsha, king of Gomorrah" and also with the kings of Admah, Zeboiim and Bela or Zoar (xiv, 2), who (xiv, 3) all were "joined together in the Vale of Siddim (the same is the Salt Sea)." Josephus tells us¹ that when the "Assyrians" returned,

"they laid waste all Syria . . . and pitched their camp in the Vale called the *Slime-pits*, for at that time there were pits in the place; but now, after the destruction of the city of Sodom, that vale became the Lake Asphaltites, as it is called."

The allied cities must have been fully conquered, for they remained subservient to Elam for twelve years. But,

"In the thirteenth year they rebelled" (xiv, 4) "and in the fourteenth year came Chedorlaomer and the kings that were with him, and smote the Rephaim in Ashteroth-Karnaim and the Zuzim in Ham, and the Emim in Shaveh-Kiriathaim (xiv, 5), and the Horites in their Mount Seir, unto El-paran, which is by the wilderness."

By way of the Bronze Age route near the edge of the desert east of Gilead the invaders reached the far south of the present Palestinian nation not far from the edge of Sinai. After this "they returned, and came to En-mishpat (the same is Kadesh),² and smote all the country of the Amalekites and also the Amorites that dwelt in Hazazon-tamar"³ (xiv, 7). Verses 8 and 9 of the same chapter relate the marching of the kings of Sodom, Gomorrah, Admah, Zeboiim and Zoar into the Vale of Siddim to attack the Eastern invaders. Verse 10 continues: "Now the Vale of Siddim was full of slime pits;⁴ and the kings of Sodom and Gomorrah fled, and they fell there, and they that remained fled to the mountain."⁵ Then the victors "took all the goods of Sodom and Gomorrah, and all their victuals, and went their way" (*Gen.* xiv, 11). They also took Lot (xiv, 12), and it was then that Abraham proved himself the loyal uncle and perfect ally; for, on learning from a refugee, who escaped to Mamre, that the entire populace was captive (xiv, 13-16), Abraham armed 318 of his trained servants and pursued the fleeing enemy to Dan and Hobah "on the left bank of Damascus" far to the north (xiv, 14-15): "And he brought back all the people, and also brought back his brother Lot and his goods, and the women also, and the people" (xiv, 16). The king of Elam and his allies had by that time been slaughtered "at the vale of Shaveh" and Abraham would take no pay for his services (xiv, 23).

Passing over two references to the wickedness of Sodom and Gomorrah (*Gen.* xiii, 13 and xviii, 20), we come to the account of destruction of these cities (xviii, 16 to xix, 29) and of the flight of Lot, during which his wife was transformed into the notorious "pillar of salt" (xix, 26), while Yahweh "rained upon Sodom and upon

¹ *Op. cit.*, Chapter 9.

² That is to say, Kadesh-Barnea. This important place, referred to in *Genesis*, *Numbers*, *Deuteronomy*, *Judges* and mentioned by Josephus, was probably Ain Kadis, an oasis 35 miles west of Wadi Arabah and 50 miles south of Beersheba.

³ This spot is Engedi (or Ain Jedy), an oasis surrounding a fine spring at the foot of frowning cliffs west of the Dead Sea and 25 miles from its south end.

⁴ What is more likely than that these pits were identical with the bituminous seepages described below?

⁵ Probably Mount Seir—the only mountain mentioned—although it is possible that Jebel Usdum ("the Mount of Sodom") might be the one referred to.

Gomorrah brimstone and fire . . . and he overthrew those cities, and all the Plain . . ." (xix, 24-25). The account states that Abraham, in his tent on the Plain of Mamre, high on the hills near Hebron,

"got up early in the morning to the place where he stood before Jehovah: and he looked toward Sodom and Gomorrah, and toward the land of the Plain, and beheld, and lo the smoke of the land went up as the smoke of a furnace" (xix, 27-29).

That these cities were completely destroyed is clear from the further silence of Genesis about them. But ever after in Palestine, the name "Sodomite" was synonymous with wickedness.

THE POSITION OF ZOAR

Some of the arguments advanced for a northern location of Zoar and therefore of Sodom are almost convincing. Nevertheless, explorations made by De Luynes¹ and much more recent archaeological work by Albright and others seem definitely to establish Zoar in the South. De Luynes entered deeply into a discussion of the position of this town and, after reviewing the literature on the subject in many languages, he concluded that the Vale of Siddim lies beneath the present waters of the southern bay, south of El Lisan.

Stewart, an advocate of the northern site, reviews the historical record that, at the time of the catastrophe, Abraham looked from his camp near Hebron "toward Sodom and Gomorrah and toward all the land of the plain." Stewart was of the opinion that the patriarch's direction of vision thereby was northeasterly rather than southeasterly. Yet even a moderate amount of smoke rising from either the north or south end of the Dead Sea depression should have been easily visible from the plain of Mamre near Hebron.

Albright has since proved² that the Byzantine-Arabic Zoar in this region was of later origin than the Old Testament period. The rising water-level of the Dead Sea is supposed to have caused changes in the positions of the various oases so that no town site was necessarily stable for millennia. The supply of water from each stream appears to have been ample to support a single town and no more, disregarding fortresses and what Albright classes as "open hamlets." For these reasons he has no doubt that the cities of the plain lie buried beneath the present waters of the Dead Sea and he thinks that (p. 58):

"The Old Testament Zoar would then have been situated on the Seil el-Qurâhi below the Byzantine site. Sodom, which Hebrew tradition places nearest Zoar, may perhaps have been on the lower course of the Seil em-Numeirah, while Gomorrah may have been on the Seil 'Esâl."

It may be of interest to note in this connection that the Dead Sea, in the time of the Romans, was so shallow opposite El Lisan that a causeway connected the peninsula with the west coast near Masada, for the Romans did much business with lands to the East. If a crossing was likewise possible in Abraham's time, this would have afforded an even easier route from Engedi to Sodom than would a return march down the west coast. Furthermore, the shallowness of the southern bay sug-

¹ *Op. cit.*, Vol. I, pp. 363-6 and p. 375.

² W. F. Albright, "The Archaeological Results of an Expedition to Moab and the Dead Sea," *Bull. Amer. Sch. Oriental Res.*, 14, 1924, pp. 2-12.

gests that this body of water may not have existed in early historical time, in which case the Lisan route to a southern Sodom would present little difficulty as opposed to a long and tedious march through hostile country which Chedorlaomer would have been obliged to make in order to reach the north end of Dead Sea, by way of the Judaeen highlands, had Sodom and Gomorrah stood in the North.

ANALYSIS OF ARCHAEOLOGY'S RECORD

Archaeological researches seem to have settled the matter definitely in recent years. Any tendency to favor a northern site for Sodom and Gomorrah was nullified by the fact that Condor was unable to find any ruin in the northern Ghor¹ and defended his failure on the plea that destruction by fire could leave no ruins.

Condor once pointed to a certain site in the North as being possibly that of one of the unfortunate cities on account of its name, but other modern investigators are convinced that any attempt to postulate the identity of localities on the sole basis of a slight similarity of place names is far fetched in Asia where names are frequently repeated several times within a few miles distance. An opposite method of reasoning has been applied by recent investigators of Teleilat Ghassul, east of the Jordan, only a short distance north of the Dead Sea, where the finding of charred timbers led to the belief that the ruin might be that of ancient Sodom. Since this settlement was proved by the excavators to date from about 3000 B.C., it may constitute one of the earliest known settlements in Palestine or Transjordan and might actually be the ancient capital of the Pentapolis. On the other hand, many cities have been excavated or will be found, any one of which could reasonably be placed in an identical category for similar reasons; for something more than age and fire-action are necessary to prove identity with Sodom.

A condition necessary for habitation at the south end of the Dead Sea, which is not found in the North, consists of several streams of fresh water that emerge from Transjordanian canyons southeast of the Sea. Albright, on the basis of several expeditions, has explained² that the southeastern corner of the Dead Sea is lined by a plain from Ghôr el-Haditha and Ghôr el-Mesra'ah, Ghôr 'Esâl and Ghôr en Numeirah, to Ghôr es-Sâfi and Ghôr el-Feifeh. These are favored by a series of fresh water streams: Seil el-Buqsâseh, Seil ed-Drâ', Seil 'Esâl, Seil en-Numeirah, Seil el-Qurâhi and Seil el-Feifeh. He tells us that, in the Middle Ages, the region was densely peopled, and supported flourishing plantations of sugar and indigo.

The proof that the region was occupied in the Bronze Age was established on the basis of observations in association with Père Mallon at Bab ed-Drâ,³—a fortress with stone walls 12 feet thick and an extensive settlement, together with enclosures and fallen monoliths "all belonging to the third millennium B.C. according to the

¹ Old Jericho and Teleilat Ghassul have since been excavated (Pères A. Mallon and Robert Koëppel and René Neuville: "Teleilat Ghassul," *Compte Rendu des Fouilles de l'Institut Biblique Pontifical*, 1929-1932, Rome, 1934.

² W. F. Albright, "The Jordan Valley in the Bronze Age," *Ann. Amer. Schools of Oriental Research*, 6, 1926, p. 56.

³ *Bull. Amer. Sch. of Oriental Res.*, 14, 1924, pp. 2-12.

clear ceramic evidence." The pottery is "characteristically Early Bronze."¹ Albright considers that the pilgrims who went annually to Bab ed-Drâ came from the Bronze Age towns "now covered by the waters of the Dead Sea." In other words, they came from the half-legendary cities of the plain, Sodom, Gomorrah and Zoar, Admah and Zeboiim (p. 62). "The material remains at Bab ed-Drâ stop in the same age as the end of Sodom and Gomorrah."

Albright sums up the archaeological evidence in these words:²

"There can no longer be any question as to whether Sodom and Gomorrah were situated at the southern or northern end of the Dead Sea, since the medieval Zoar, which must have been located in the immediate vicinity of the ancient town, is expressly placed at the southern end, both by Byzantine and by Arabic sources. . . . The only possible location for the Vale of Siddim, with its asphalt wells (rendered 'slime pits' in the AV) is in the southwestern part of the Dead Sea."

The same studies revealed the fact that in the Middle Ages this region was densely populated, supporting flourishing sugar and indigo plantations and that in 2200 B.C. the hills of the western slope of Judah were rather heavily wooded with "scrub."

Glueck³ has described the remains of many Bronze Age towns southeast of the Dead Sea. Albright⁴ has now proved this to be a place of pilgrimage to which people of the early Bronze Age came at intervals from the cities of the Plain. He contends that *Genesis* xiv is a historical epic⁵ and consequently finds it "hardly possible to separate the abandonment of Bab ed-Drâ from the destruction of the Cities of the Plain," for the proven similarity in age is striking "according to any system of Biblical chronology." Albright was of the opinion that the "mysterious valley of Siddim . . . presumably lay between the Lisan and the western coast" and that we may assume the correctness of the traditional view that the Cities of the Plain are buried under the Dead Sea water. Zoar would then have been situated on the Seil el-Qurahi, Sodom on the lower course of Seil en-Numeirah and Gomorrah on Seil 'Esal.⁶ He adds that the dates for the events described in *Gen.* xiv, last proposed by Bohl and himself in entire independence of one another, "differ only by a quarter century, 1675-1650 B.C."⁷

HYDROLOGY'S CONTRIBUTION TO THE PROBLEM

Changes in water level also afford some help in a final solution of the intricate problem. The level of the Dead Sea has not been constant, with reference to the land along its banks, even during historical time. With respect to changes in this body of water and their causes,⁸ the level is about two meters higher⁹ than at the time of the English survey, and the southern basin is fully a third larger than it was a century ago. There is no doubt that the increase has been considerable.

¹ *Annual Am. Schools*, 6, pp. 58-61.

² *Bulletin Am. Schools*, 14, p. 9.

³ Nelson Glueck, "Explorations in Eastern Palestine and the Negeb," *Bull. Amer. Sch. Oriental Res.*, 55, 1934, pp. 3-21.

⁴ *Ann. Amer. Sch.*, 6, pp. 61-2.

⁵ W. F. Albright, "New Israelite and pre-Israelite Sites: The spring trip of 1929," *Bull. Amer. Sch. Oriental Res.*, 35, 1929, pp. 1-14.

⁶ *Bull. Amer. Schools*, 14, pp. 8-9; *Bibliotheca Sacra*, pp. 285 ff.

⁷ *Op. cit.*, pp. 163-6.

⁸ *Ann. Amer. Schools*, Vol. 6, pp. 54-5.

⁹ Schroetter, in *Das Tote Meer*, Wien and Leipzig, 1924, p. 12, gives the difference as 4 meters in a century, but Masterman, who made measurements at Râs el Fešhah (*Palestine Exploration Fund Quarterly Statement*, pp. 192 ff.) found a variation of 60-90 cm. annually.

"The outstanding fact in any discussion of the question is the steady rise of the waters of the Dead Sea . . . due to two main causes, the deposit of silt at the mouths of the river Jordan and the other tributary streams, and the steady precipitation of mineral salts from the saturated solution, one and a sixth times as heavy as pure water. . . . The denudation of forests . . . has probably increased the influx of water slightly, but this must rank as a subsidiary cause."¹

A forest of dead tamarisk trees standing in the water at the south end of the Dead Sea is proof of the rise of its waters (Fig. 12).

"The road along the base of Jebel Usdum, which in De Sauley's time was 80-230 meters wide, has been under water since the early nineties. . . . Similarly, the famous island at the northern end of the Dead Sea, Rujm el-Bahr, has been submerged since 1892."²

Walcott earlier referred to the persistency with which "the notion has been entertained for the last nineteen centuries that the Dead Sea covers a district which before its submersion was not only the Valley of Siddim but also the Plain of the Jordan" and that "an elaborate account of the catastrophe of its submersion has been constructed even very recently by one of the most able scholars of our day."³ Disagreeing with the inferences drawn, however, Walcott remarked: "The submersion of the Vale of Siddim, the conversion of its site to the waters of the Dead Sea, is simply a question of historic fact, the statement of which does not require a chronicler who is 'able to interpret natural phenomena'" (as Grove had maintained was needed).



FIG. 12.—SUBMERGED FOREST AT SOUTH END OF DEAD SEA

(Photo by American Colony Stores, Jerusalem)

Proof of the rising of Dead Sea waters during the historical period is found in the disappearance of the island of Rujm el-Bahr, which formerly stood near the head of the Sea, not far from the mouth of the Jordan. This land, still clearly visible on a photograph made in 1886, appears to be perhaps half an acre in size and its nature is unquestionable on inspection of the picture. Picnic parties are said formerly to have gone there. The memory of the photographer after 48 years was vivid enough to enable him to express an opinion as to the nature of the exposed rock.

Equally well-substantiated accounts mention a Roman causeway that formerly crossed two miles of shallow sea from near Masada on the west coast to Point Molyneaux on El Lisan; some archaeologist is said to have found traces of such a structure. Robinson asserts⁴ his Arab companion reported that the "narrowest part

¹ Albright, *Bull. Amer. Schools*, 14, pp. 2-12.

² Blanckenhorn, *op. cit.*, p. 111.

³ *Op. cit.*, p. 118.

⁴ *Op. cit.*, pp. 521-2.

or strait, between the peninsula and the western shoal or tongue of land" was once fordable; but, at the time of Robinson's visit, the water was too deep. He also mentions a ford delineated "on Seetzen's map." Robinson also adds that Irby and Mangles, coming from Kerak across El Lisan, "saw the ford indicated by boughs of trees" and observed a caravan which had only just landed on the opposite side. A civil engineer reported to the present writer that, in a conversation held about 30 years ago with Arabs, they stated they had forded camels across this place in their boyhood in only 2 feet of water. The genuineness of such a performance is manifested by soundings conducted by Lynch who found only 2 to 6 meters (6 to 18 ft.) of depth along this line. The disappearance of the passage, however, must have been due to the action of an earthquake,¹ and not entirely to the rise of the water level.

EVIDENCE FURNISHED BY GEOLOGY

The strongest proof that Sodom and Gomorrah stood at the south end of the Dead Sea is offered by geology. Since traditions often originate in actual events, the author of Genesis, in fancying that Lot's wife, fleeing from blazing Sodom, was transformed to a "pillar of salt," doubtless had grounds for his supposition. Salt columns are not so common anywhere in the world that a story-teller would be likely to conceive of a saliferous petrification without having precedent for the idea. An objective warrant for the prevalent superstition exists in the form of at least one such mass, 40-60 feet high, that stood on Jebel Usdum (and perhaps still exists), always known to natives as the proverbial "pillar of salt" (Fig. 9).

Forces corresponding to *Genesis*' description may have afflicted the cities in either one of two ways: through volcanic agencies or by combustion of local materials. The pristine writer had his own idea of the precise cause of the catastrophe, for he specifically states that Jehovah rained "brimstone and fire" upon the cities. Blanckenhorn accounted for the phenomena by postulating² a "shower" of ashes, which is not so improbable as it may sound, for volcanoes habitually drop ashes on country surrounding them. Furthermore, the present writer has studied tuff and basalt flows and the igneous roots of a fossil vent (also seen by Blanckenhorn)³ near the mouth of Zerqa Ma'in in the east wall of the Dead Sea (Figs. 13, 14), about 50 km. (over 30 miles) north of the probable southern site of the ill-fated settlements. Other volcanic plugs are distributed throughout western Transjordan in Dead Sea latitudes, and fossil beds of volcanic tuff exist in various parts of the late Tertiary column.

Wyllie, already quoted, acknowledges a probable association between volcanology and the destruction of Sodom and Gomorrah, but the present writer, after studying relationships of the western Transjordanian igneous and pyroclastic beds to existing and recent topography, is not convinced that lava or ash eruptions have occurred in the locality as recently as 4000 years ago. He inclines to the contrary view that no volcanic activity has taken place there for several times that period, in which case

¹ Alois Musil, "Moab," *Arabia Petraea*, Wien, 1, 1907, note on p. 172.

² *Naturwissenschaftliche Studien*, p. 119.

³ See his geologic cross section (fig. 70, p. 209) and cross section of neighboring lava flows (fig. 68, p. 207).

no ash shower could have been responsible for the fate of the Pentapolis. Topographic relationships render it probable that the last outburst in the vicinity took place thousands of years before Abraham's time.

By contrast, exudations of bitumen, petroleum and probably natural gas (since the last-named is generally an accompaniment of these substances), emerging throughout historical time, may have been erratic and have taken place whenever disastrous earthquakes or controlling subterranean pressure impulses were manifested. The seepages, catching fire from lightning or human action, would adequately



FIG. 13.—GORGE OF THE ZERQA MA'IN



FIG. 14.—DEAD SEA FROM NEAR MOUTH OF ZERQA MA'IN

account for recorded phenomena without necessarily having recourse to supernatural or fanciful theories (except, perhaps, in the case of the obviously fictitious part of the story, where a human being was transformed into salt).

Tales of "slime pits" are not limited to the Bible, for, nearly a century ago, Lynch¹ found Wadi Zuweirah, at the extreme north end of Jebel Usdum, to be "a broad, flat, marshy delta, the soil coated with salt and bitumen, and yielding to the foot." He likewise tells² us that the sand on the shore of El Lisan was "incrusted with salt and bitumen," and that "bright, smooth" and conchoidal black bitumen fragments were picked up as far north as Masada (Sebbah). Lieutenant Lynch evidently believed³ that Sodom and Gomorrah lay submerged under the briny waters, for he asserts that this part of the Sea "most probably covers the guilty cities . . . and that many fathoms beneath it lay embedded the ruins of the ill-fated cities of Sodom and Gomorrah." Near the reputed "pillar of salt," Lynch found the water

¹ *Op. cit.*, p. 306.

² *Op. cit.*, p. 297.

³ *Op. cit.*, pp. 307 and 310.

"covered with saline fragments and cakes of bitumen." Farther north, a sailor "made his way with difficulty for more than a hundred yards over black mud, coated with salt and bitumen." This description might easily conform to *Genesis*' declaration that "the vale of Siddim was full of slime pits." We know that Nabataeans who dwelt at Petra to the southeast, "though they were nomads, had an extensive trade in myrrh and spices from Arabia Felix, which they sent to the seaports, and in bitumen from the Dead Sea, which they sent to Egypt."

One of the earlier attempts to elucidate the problem of Sodom and Gomorrah was that by Tristram¹ who, diagnosing the contrast between natural and miraculous causes, concludes:

"That during some earthquake, or without its direct agency, showers of sulphur, and probably bitumen, ejected from the lake, or thrown up from its shores, and ignited perhaps by the lightning which would accompany such phenomena, fell upon the cities and destroyed them."

The present writer is unable to accept "showers of sulphur" (a substance which is not known in the region in large bulk) or of bitumen. Volcanic ashes might have fallen, but bitumen *from the earth* is the most probable combustible material, especially as there are voluminous asphalt deposits in Wadi Mahawuat, about a mile west of Jebel Usdum, which were perhaps first described geologically by Blanckenhorn.² In this spot one still finds seepages of semi-fluid petroleum in the form of soft bitumen saturating tarry conglomerates of late Tertiary or Recent age, which have a reported volume of 22,000 cubic meters (nearly 750,000 cu. ft.) containing 4,000 cubic meters (140,000 cu. ft.) of asphalt, emanating either from below the surface or from contiguous Senonian limestones. Specimens collected by Mr. David A. Sutherland of London and photographs of the outcrops are in possession of the writer.

Antedating the observations of Lynch and Blanckenhorn, however, were descriptions by Hitchcock, who wrote³ that, after the earthquake of 1834, a large quantity of bitumen drifted ashore near the south end of the Dead Sea and "Arabs brought about six thousand pounds to market." A mass like an island or a house is said to have risen to the surface after the earthquake of 1837. Eighteen centuries earlier the Jewish historian Josephus had related that⁴ the sea in many places sent up black masses of asphaltum, "which floated on the surface, having the form and size of headless oxen" (Cf. Fig. 15).

Discussing these accumulations Walcott declared⁵ that the slime pits of the Vale of Siddim were "wells of asphaltum or bitumen, probably of various dimensions, 'sufficient,' as Mr. Groves states, either from their number, or size, or both, 'materially to affect the issue of the battle.'" He reminds us that three eminent historians of the century before Christ as well as

"Diodorus Siculus, Josephus, and Tacitus represent the asphaltum as rising to the surface of the water in black and bulky masses. The theory that the Vale of Siddim is covered by the southern part of the sea harmonizes the ancient record with late phenomena. It sustains the statement that it was full of bituminous wells; it accounts for their disappearance, and it explains the occasional spectacle since,

¹ H. B. Tristram, *The Land of Moab; A Journey of Travels in Palestine*; London, 1865 (2nd ed., 1866), pp. 348, 363, etc.

² *Op. cit.*, pp. 111-20. ³ *Op. cit.*, p. 371. ⁴ Josephus, *Bell. Jud.*, 4, 8, 4. ⁵ *Op. cit.*, pp. 120-21.

down to the present time, of large quantities of asphaltum on the surface of the water. Thus far we have a consistent, confirmed, uncontradicted testimony."

Josephus further tells us,¹ referring to travelers mentioned in the second narrative:

"They encamped in the valley called the Wells of Asphalt; for at that time there were wells in the spot; but now that the city of the Sodomites has disappeared, that valley has become a lake, which is called Asphaltites."

The bituminous nature of the southern area is therefore an undoubted tradition of the Jewish nation.

Imagination of another historian long ago conjured up a hypothesis of association of bituminous substances with the destruction of these cities, for Milman wrote:²



FIG. 15.—LUMP OF BITUMEN FLOATING IN THE DEAD SEA

(Photo by George S. Blake)

"The cities stood on a soil broken and undermined with veins of bitumen and sulphur, . . . The walls . . . were perhaps built from the combustible materials of the soil." A similar hypothesis was scientifically advocated as recently as 28 years ago in the words:³

"The probable secondary cause employed in the destruction of Sodom and Gomorrah was the ignition by an earthquake of the vast underlying reservoir of gas and petroleum." In penning that hypothesis, Wright proceeded to point out the similarity in structural and stratigraphic conditions in the Dead Sea area to those in oil fields of the United States and at Baku on the Caspian Sea, quoting comparisons by Emerson.⁴

Emerson's views⁵ on the mechanics of the Dead Sea "rift" or "ramp" and on the origin of the salt plug at Jebel Usdum are now out of date. Likewise, in the opinion of the author of the present article, both of these writers give sulphur too

¹ *Antiq.* i, 9.

² Milman, *History of the Jews*, 1, pp. 15, 16.

³ G. F. Wright: *Scientific Confirmations of Old Testament History*, Oberlin, Ohio, 2nd ed., 1907, p. 144.

⁴ B. K. Emerson, *Proc. Amer. Assoc. Adv. Science*, Buffalo, N. Y., 1906, pp. 109-11.

⁵ Wright, *op. cit.*, p. 145.

prominent a place as a local combustible material.¹ A large proportion of Christian thinkers may also be found to disagree with Wright's belief in the divine instigation of the catastrophe, since an all-wise Creator need not be supposed to have brought about an accident that was clearly the result of the Sodomites' violation of their superstitious or moral code.

Although an abundance of evidence suggests an escape of natural gas from the southern Dead Sea depression in the past, there is nothing to cause such a view in regard to the opposite end of the Sea. No boggy land in the North warrants comparison with "slime pits" as do existing and historical petroliferous signs in the South. Considering the bituminous nature of the surroundings, gas in association with salt water has probably emerged within walking distance of Jebel Usdum during historical periods, not in one spot alone, but along several known fault planes on either side of the valley. The gas may have caught fire and facilitated destruction of the five ancient cities. No portion of the northern Ghor now shows evidence of this sort.

The two "angels," represented by *Genesis* as being sent to urge the family of Lot to flee in advance of the threatened conflagration, were doubtless merely personified dictates of common sense. When Lot was finally induced to heed their warning, everyone escaped except the wife, who, having less faith than the rest, stopped to gaze sorrowfully at the burning town and was overwhelmed by either fire or brine. After that tragedy the superstitious Israelites would certainly assume any saline pillar to be identical with the petrified fugitive. Other phenomena mentioned in *Genesis*² may likewise be due to the escape of natural gas in a part of the world where this substance exists widely and where it sometimes escapes to the earth's surface.

SUMMARIZED CONCLUSIONS

If, in addition to the topographic, geologic, historic and archaeological arguments advanced, the reader requires further evidence of the approximate location of the five cities of the Plain, a sequel may be furnished by stories of air-pilots who claim to have seen ruins through waters of the southern embayment of the Dead Sea. Whether or not these aviators were deceived in their interpretation of observations, we must acknowledge that the passages quoted from the First Book of Moses are substantially history, not fiction. Sodom, Gomorrah and the three allied communities really existed and may have been populous communities at the time the Israelites first entered Canaan.

These ancient settlements—whether sizable cities or villages of only moderate importance—were not founded upon rock but on sinking bottom lands of one of the most unstable valleys in the world,—a "rift" or "ramp" *graben*, which still slips between its bounding planes to some extent on the occasion of every local earthquake.

¹ Sir William Dawson, in "Syria and Palestine," pp. 129 ff., agrees with Wright.

² For instance, Moses' "burning bush" in Sinai (*Exodus* iii, 2), or the "fiery furnace" of Shadrach, Meshach and Abednego in Assyria (*Daniel* iii, 23-27). The writer has walked through blazing outcrops from which escapes natural gas: impressive, but giving off little heat. In addition, someone has hinted that when the water in the pool of Bethesda in Jerusalem was "troubled" by an angel to indicate the auspicious moment for the impotent to descend for healing (*John* v, 4), the motive power may actually have been escaping bubbles of gas. Since Jerusalem is situated on an anticline, and since anticlinal sites are actually most favorable for gas seepages, such an explanation is not impossible.

The notorious "slime pits" may have been ordinary swamps, of which many exist in the Ghor, both north and south; but history and present surface indications controvert this view. The pits were more probably oil or bitumen seepages, "mud volcanoes" or primitive hand-dug petroleum "wells" (perhaps a complex of asphaltic ground) such as have been observed by travelers in the Soviet Union, Iraq, and Iran during the past century.

Consequently the weight of scientific evidence, as well as traditional opinion, favors a southern site and not a location north of the Dead Sea. Most probably the cities of the Plain are buried beneath the waters of the shallow embayment which lies south of the latitude of El Lisan.

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NOTE: The photographs in this article are published through the courtesy of the following: Fig. 2, the late Joseph C. Hill; Fig. 5, Geographische Gesellschaft in Wien; Figs. 8 and 10, D. A. Sutherland; Figs. 9 and 12, American Colony Stores, Jerusalem; Fig. 15, George S. Blake Geological Adviser to the Palestine Government. All others were taken by the author.

A GRAECO-PHOENICIAN SCARAB FROM BYBLOS

IN THE discussion of this scarab (Fig. 1), which was found at Byblos, the quotation marks which ordinarily surround the word "Graeco-Phoenician" have, contrary to accepted usage, been omitted. In my opinion, we are dealing with a hybrid work of art which is faithful to no one school but which exhibits tendencies of several.

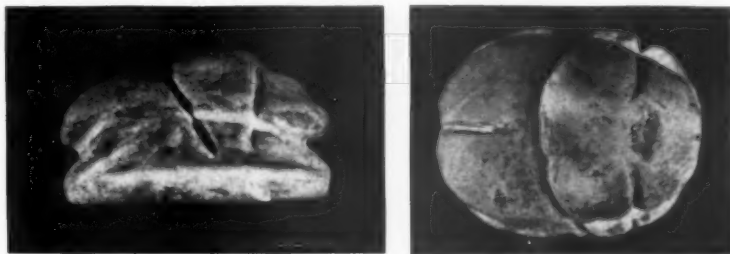


FIG. 1.—GRAECO-PHOENICIAN SCARAB

The scarab is seven-eighths of an inch long and five-eighths of an inch wide. It is one-half inch thick at maximum and tapers off to a thickness of one-quarter inch at either end. The material is a hard, light-greenish stone remarkable for its greasy character. The material appears to be identical with that described by King¹ as being typical of scarabs found in graves of Tharros in Sardinia. There is a hole bored longitudinally through the stone for purposes of mounting, more probably in a necklace than on a finger ring.² Little trouble has been taken with the details of the beetle, but at the same time the representation is both pleasing and accurate. It stands upon a narrow plain base. This treatment excludes an Etruscan origin for the scarab.³

The intaglio on the bottom of the stone (Fig. 2) is surrounded by a single, accurately drawn line. The two human figures, which will be described later, stand slightly above an exergue, one-eighth of an inch high, filled in by crossed diagonal lines. Line and exergue again point to a Phoenician origin for the stone.⁴

When we examine the engraved figures of the two warriors, however, a purely Phoenician origin for the scarab becomes extremely doubtful. To the left, as one looks at the engraving, is a warrior advancing to the right. He bears in the left hand, which is hidden, a spear at shoulder level. The spear has a



FIG. 2.—INTAGLIO WITH COMBAT SCENE

¹ C. W. King, *Antique Gems and Rings*, 1, 1872, p. 124.

² H. Gebhart, *Gemmen und Kameen*, 1925, p. 36.

³ G. Richter, *Catalogue of Engraved Gems of the Classical Style*, 1920, p. 32.

⁴ For exergue, see D. Osborne, *Engraved Gems*, 1912, pp. 64-65; for border-line, Gebhart, *op. cit.*, p. 44.

long leaf-shaped blade and where it joins the shaft, a large round ball of some material appears to be suggested. This may have been a convenient method of avoiding too deep a thrust into an enemy's body which would result in breaking the shaft or in difficulty in removing it.¹ The man's body from chin to thigh is hidden by a large round shield, the *ἀσπίς*, which is carried on the right arm. It bears a decoration consisting of a center circle with included dot and four half-circles with included dots arranged symmetrically around the edge of the face. Beneath the shield appears the lower edge of a close fitting garment, which ends just above the knees and which, on close examination, will be seen to have a finial border of embroidery. From behind the right leg there extends a rather long, narrow, slightly curved object which may be a sword-sheath or perhaps the end of a belt. The left leg is raised, bent at the knee. The right leg remains on the ground but is bent sharply forward, in an attitude reminiscent of the archaic "Knielauf." As far as can be seen, the man is barefoot. The head, at least as much of it as can be seen above the covering shield, is interesting, since a markedly Semitic nose is apparent. The man wears a Phrygian cap.

Opposed to this warrior at the right is a kneeling bowman. He kneels upon his left knee facing left. The right leg is bent at a right angle and is advanced slightly. He wears a garment identical with that of his opponent, in so far as it is tight-fitting, ends just above the knee, and has an embroidered border. A long narrow appendage is shown extending backward from above the hips. It is similar to that of the spearman but here it seems to be closely connected with a narrow belt around the man's waist. A quiver (?) depends obliquely rearward from the belt. He holds his bow in the right hand, fully bent, and ready to discharge. The arrow is correctly shown cutting across his chest to the left hand, which is at his left shoulder. The left arm, bent at the elbow, extends horizontally to the rear. The face is poorly done and hair and beard have been most perfunctorily executed with a relatively coarse gouge and drill in a careless technique not at all in keeping with the rest of the figure. The man, like his opponent, is apparently barefoot.

That both figures are left-handed in the engraving is of course necessary in order to have them correctly shown on the impression. Xenophon in his *Lacedaemonian Polity* remarks that the left side is the normal shield side, in the passage in which he calls "to turn to the left" *παρ' ἀσπίδα καθίστασθαι*.² The importance given to the device on the shield is, I believe, a sure indication that this scarab was used as a personal seal.³

I have not been able to find an intaglio similar in spirit to this one among the large number of published Graeco-Phoenician gems. For the most part, these have always been more distinctly Oriental in concept, showing fabled beasts, gods or single space-filling figures. This scene, however, could very advantageously be compared with fighting scenes common on Greek vases of both the black- and red-figured styles. That the stone is not entirely of Greek style has, however, been pointed out above.

¹ Spears of this appearance are relatively rare in Greek art. I know of no other engraved gem showing a weapon of this type. It is shown, however, on vases in O. Benndorf, *Griechische und Sicilische Vasenbilder*, Tafel IV, No. 1; S. Reinach, *Peintures des vases antiques* 1891, Millin II, pl. 37; W. Hamilton, *Collection of Engravings from Ancient Vases of Greek Workmanship*, III, 1795, pl. 40. In these the round object is shown more clearly than on this intaglio.

² Max Greger, *Schildformen und Schildschmuck bei den Griechen*, 1908, p. 32.

³ A. Furtwängler, *Antiken Gemmen*, 1900, III, p. 78.

The mastery of space shown by our engraver, together with the rather free poses of the figures points to a date around the beginning of the second quarter of the fifth century B.C.¹ There is none of that dryness or flatness of composition which authorities consider the hall-mark of both Phoenician and Etruscan work, in opposition to the more plastic Greek.² Deep cutting on the intaglio, an indication of Phoenician workmanship, according to King,³ is not present. Both corundum point and the drill have been used, but I do not discern any marks of the wheel, an observation which again indicates a rather early date for the scarab. I would suggest 490 to 470 as a probable date.

We have here, then, a piece of late archaic work showing affinities to both Near Eastern and Greek mainland artistic conceptions. Phoenician origin is indicated by material, border-line, exergue and facial features of the standing spearmen. Greek origin is indicated by the spirit of the composition and the workmanship. The styles of the two schools have been neatly fused and have produced a blended Graeco-Phoenician work. Its discovery at Byblos in Syria may be taken as evidence of the hellenophile tendencies of that town even at this early date.

DONALD F. BROWN

¹ J. H. Middleton, *The Engraved Gems of Classical Times*, 1891, p. 24; H. B. Walters, *Catalogue of the Engraved Gems and Cameos, Greek, Etruscan and Roman in the British Museum* 1926, p. XXXI, Introduction; A. Furtwängler, *op. cit.*, p. 78. ² Furtwängler, *op. cit.*, p. 114. ³ *Op. cit.*, p. 116.

A DIONYSIAC PERSONIFICATION IN COMEDY AND ART

THE comic poet Aristophanes represents the goddess Peace as pulled out of the earth in what appears to be a burlesque of mystic rite.¹ With Peace emerges Opora, who personifies the season of ripening fruits, and who subsequently in the comedy² is given in marriage by Hermes to Trygaeus with instructions that he live with her and



FIG. 1. — MOSAIC FROM A VILLA AT DAPHNE IN SYRIA

beget Botrys, "Grape-cluster." Since Opora is the name of a Bacchante³ and Trygaeus is transparently Dionysiac, they are entitled to name their son Botrys. This Aristophanic marriage gains in interest in the light of a mosaic recently discovered at Syrian Daphne (Fig. 1).⁴ It represents Opora, "Autumn," seated upon a couch beside a reclining Angos, "Wine-jar," with Oinos, "Wine," standing nearby. Angos has already received a cup from Oinos and looks toward Opora, placing his hand on

¹ *Pax*, 510 ff.

² 706.

³ Daremberg et Saglio, *Dict.*, s.v. *Maenades*, p. 1489, n. 7.

⁴ *A.J.A.* 1936, p. 6, fig. 7.

her shoulder and seeming to urge her to accept the cup which Oinos holds out. These three figures personify the season when the grape ripens, the wine which is made from the grape, and the jar in which the wine is stored. They give a pictorial version of the words of Nonnus: ὁπώρας ἀγγεῖσιν οἰνοδόκοις.¹

The personification of a wine-jar in such company is not an innovation by the mosaicist because Aristophanes jokingly speaks of Dionysus as the son of Stamnius, "Wine-jar."² The figure of speech may well be very old since the personified pots of prehistoric Troy show that the primitive potter conceived of his vases, and possibly of his wine-jars, in terms of the human form, giving them ears, eyes and mouth. Later evidence of this personification is found in Pausanias, who records the name of Keramos for a son of Dionysus and Ariadne,³ and in Nonnus,⁴ who gives the leader of the Lydians the name Stamnus, making him the companion of Dionysus. Nonnus also represents Pithos, "Wine-jar," seated upon a couch and again as attending Botrys and Dionysus.⁵

The representation of Opora on a couch beside Angos with Oinos as *oinochoōs* would normally be interpreted as a symposium but, in view of the rareness of her personification and of the fact that she is married in the Aristophanic comedy, the mosaicist may have been obligated to comedy for his theme, not to Aristophanes directly, but perhaps indirectly, through the comedy entitled *Opora*,⁶ which Alexis brought out in the time of Alexander. The solitary fragment of this play consists of a question directed to someone who was able to drink much unmixed wine without any evidence of overloading. It is a reasonable assumption that the mosaicist worked from a copy of some early Hellenistic composition. The couch in the mosaic is set immediately before a wall, as is the couch in the Aldobrandini Marriage.⁷ Behind the couch in both scenes is a simple strong pier which rises above the wall. In both cases the wall, which reaches almost to the upper edge of the picture, is crowned with a very plain moulding. A more realistic version of a chamber is seen in the painted grave-stele of Hediste which was discovered at Pagasae.⁸ Comparison of the interior architecture of these three scenes indicates an original for the mosaic of Daphne of early Hellenistic date. The original was thus close in time to Aëtion's painting of the marriage of Alexander and Roxana in which the bridal chamber with nuptial couch was depicted.⁹ A single detail in the mosaic confirms the theory as to the date of the original. The leg of the couch, which closely resembles that in the Aldobrandini Marriage, is very like the leg of the thrones in coin-types of Alexander the Great.¹⁰ Further, the table which stands before the couch, and the crater which is set to the right in the mosaic closely resemble the table and crater in a relief at Rome.¹¹ Behind the table of this relief a curtain is suspended from a tree. This is again a Hellenistic motif.¹² The curtain is interesting, because it serves as a backdrop

¹ *Dionysiaca*, XX, 131-132.

² XIII, 500.

³ XX, 128.

⁴ *Ranae*, 22.

⁵ I, 3, 1.

⁶ Meineke, *Frag. Com. Graec.* II, p. 731.

⁷ Nogara, *Le Nozze Aldobrandini*, pl. VII.

⁸ Arvanitopoulos, *Graptai Stelai*, pl. II.

⁹ Lucian, *Herodotus or Aëtion*, 4-6.

¹⁰ Grose, Fitzwilliam Museum, *Cat. of the McClean Collection of Greek Coins*, II, pl. 127, e.g. no. 6. Cf. Richter, *Ancient Furniture*, p. 123, fig. 292.

¹¹ Arndt-Bruckmann, *Denk. Gr. u. Röm. Sculp.*, pl. 629, 1; cf. pl. 630, 1.

¹² Bulle, *Der Schöne Mensch*, pl. 279 (third century B.C.).

for a youthful figure of Dionysiac character, as is shown by the panther and the thyrsus. This curtain is as illogically placed as that in the mosaic, where it suggests a canopy suspended from strong piers set before a substantial wall. In the mosaic the ends of the two curtains hang down from a centrally placed pier while their ample folds sweep past the adjacent piers, partly represented, to other piers which must be assumed to stand beyond the frame of the scene. The mosaicist seems



FIG. 2. — ST. MARK IN A MINIATURE OF THE CODEX ROSANENSIS

to have given only a part of his original, which may, like the Aldobrandini Marriage, have included a number of supplementary figures. A variant version of a curtain as backdrop is seen in a terracotta of Hellenistic date which represents Erotes holding it up behind the newly wedded pair and their couch.¹ The origin of this curtain, which seems to be a feature of Dionysiac themes,² is the curtain of comedy to which Pollux alludes.³

¹ C. L. Ransom, *Studies in Ancient Furniture*, p. 52, fig. 30.

² Cf. the reliefs representing the visit of Dionysus to the house of a dramatic poet. ³ IV, 125.

The popularity and longevity of this curtain is attested by its survival in Christian miniatures. In the codex Rosanensis, which is dated about 500, St. Mark is represented seated and writing (Fig. 2).¹ Behind him is a curious structure, which consists of a wall with a free standing column at either end. The wall does not reach to the architrave, but, like the walls in the Pagasaeon grave-stele, the Aldobrandini Marriage, and the mosaic from Daphne, rises about four fifths of the distance, where it is crowned with a plain moulding. In the miniature, what seems to be a massive block is set upon the wall at its middle point, and from this block a curtain hangs down on either side. The block is in origin the upper end of a pier which has now been made part of the wall. The resemblance of these details in the mosaic and the miniature leave no doubt as to their close relationship and ultimate derivation from a common source.

¹ Friend, *Art Studies*, 1927, p. 138; pl. XI, fig. 107. Professor Friend kindly furnished the photograph for figure 2.

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NECROLOGY

Francis Llewellyn Griffith, Professor of Egyptology at Oxford University, born May 27, 1862, who died in 1934, was one of the initiators of the teaching of this branch of archaeology in Great Britain. He gained his knowledge of Egyptian philology through his study of the works of Champollion, Lepsius, Rougé, and Brugsch, and from 1884 he studied the monuments themselves. He excavated with Flinders Petrie and Edouard Naville the sites of Tanis, Bubastis and Naucratis. In 1886 while on a trip across the Nile valley he realized the necessity of publishing the texts of the great tombs. This was the origin of the *Archaeological Survey of Egypt*, of which he was one of the principal collaborators. Griffith was one of the first in England to undertake the editing of papyri and he specialized in demotic and hieratic paleography. In 1907 he succeeded in deciphering the Meroitic hieroglyphics, the discovery of which

¹ The Department of Archaeological News and Discussions and of Bibliography of Archaeological Books is conducted by Professor DAVID M. ROBINSON, Editor-in-charge, assisted by Professor SAMUEL E. BASSETT, Professor CARROLL N. BROWN, Miss MARY H. BUCKINGHAM, Professor SYDNEY N. DEANE, Professor ROBERT E. DENGLE, VLADIMIR J. FEWKES, Professor JOHN W. FLIGHT, Professor HAROLD N. FOWLER, Dr. SARAH E. FREEMAN, Professor HENRY S. GEHMAN, Mr. E. BIKREN GETZE, Dr. GERTRUDE GREYER, BATTISCOMBE GUNN, Professor FRANKLIN P. JOHNSON, Professor ROLAND G. KENT, Dr. STEPHEN B. LUCE, Professor CLARENCE MANNING, Professor GEORGE E. MYLONAS, Professor ROBERT S. ROGERS, Professor KENNETH SCOTT, Professor JOHN SHAPLEY, Professor EPHRAIM SPEISER, Professor FRANCIS J. TSCHAN, Professor SHIRLEY H. WEBER, LOUIS C. WEST, Professor FRED V. WINNETT, and the Editors.

For an explanation of the abbreviations see Vol. xxix, 1, pp. 115-116; xxxiv, p. 124; xl, p. 183.

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was due to the *Oxford Excavations in Nubia*, the expenses of which were paid from a fund of £8,000, which he had established at the University of Oxford for the encouragement of Egyptological study (cf. *Jour. of Eg. Arch.* XX, 1934, pp. 71-77).

Paolo Orsi died November 9, 1935. He was born in 1859 and was educated at the University of Padua. He early began his archaeological career, assisting Halbherr at the excavations of Phaestos and Mount Ida, in Crete, in 1885. For the past forty-six years he devoted himself to work in South Italy and Sicily. At Locri he excavated the only known Ionic temple in Italy. He was Director of the Archaeological Museum at Syracuse and superintended many excavations. By his exploration of the Neolithic villages of Stentinello and of many cemeteries he discovered four periods of Siculan culture from the second millennium to the fifth century B.C. In 1924 he was elected to membership in the Accademia dei Lincei and was made a Senator. He has been a steady contributor to many archaeological journals.

Florence Melian Stawell died at Oxford recently, at the age of 69. She was born in Melbourne and studied at Newnham College, Cambridge, where she specialized in Greek and Philosophy. From 1894-95 she was a classical don at Newnham, but had to resign her position owing to poor health. She spent most of the rest of her life in London. She collaborated with Lowes Dickinson in a work on Faust, for which she made a translation. She also wrote abbreviated translations of the *Iliad* and the *Odyssey*, and a verse translation of the *Iphigenia in Aulis*. The latter part of her life was devoted to an attempt at interpreting the Minoan Script, on which she wrote *A Clue to the Cretan Scripts*, London, 1931. One of her best books was *Homer and the Iliad: an essay to determine the scope and character of the original poem*, London, 1909. Other works include a volume on

The Growth of International Thought, in the Home University Library (1929), and Plato: Socratic Discourses by Plato and Xenophon, London 1933.

EGYPT

A Twelfth Dynasty Hoard Found Near Luxor.

—In *The Illustrated London News*, April 18, 1936, pp. 682–683, there is a brief article on the new discoveries made by the Expedition of the Institut Français d'Archéologie Orientale under the direction of M. P. Jouguet, by M. CHARLES MAYSTRE. The expedition is excavating at Toud, ancient Tophium, about twenty miles south of Luxor. Early excavations, begun three years ago, cleared the remains of a temple of the Ptolemaic period, consisting of a hypostyle hall with adjoining chambers and sanctuaries. The walls are covered with hieroglyphic texts, concerning the cult of the god Mont. An earlier temple below this one was built by the Pharaoh Senusret I. The foundations are sufficiently preserved to permit the reconstruction of the plan. Some of the blocks were found, bearing bas-reliefs, with the names of two Pharaohs of the XI Dynasty, Mentuhopte IV and Mentuhopte V. During the past season the foundation of this early temple was removed in order to protect it from floods. Below the lowest course were found four bronze chests filled with treasure. The chests were buried during the reign of Amenemhet II, about 1936 B.C. The treasure may represent booty brought back from an Asiatic campaign.

A Tomb Found Beside the Second Pyramid.

—In *The Illustrated London News*, May 16, 1936, p. 860, there is a brief account, by Professor SELIM HASSAN, of a tomb recently opened near the Second Pyramid. The façade of the tomb had been cleared during the 1933–34 season. Some fragments of two granite statues were found giving the name of the tomb's occupant, Khnum-baef. One shaft was found which went down into a chamber, which was completely empty. When the tomb was entirely excavated another tomb-chamber was discovered, entered from the north, which is rather unusual in private tombs, but the custom in pyramids. The burial-chamber contained a large limestone sarcophagus. This had not been opened when the article was written. On the lid were arranged four marvelous necklaces of gold and semi-precious stones, four finer tips of copper covered with gold leaf, and some smaller necklaces. Behind the sarcophagus was a shelf on which stood a copper ewer and on the floor was a copper basin. Also in the chamber were the skeleton of a

bull, four Canopic jars and a number of plates and copper implements.

THE ORIENT

SYRIA AND PALESTINE

General Report.—In *R.A.V.* series 6, 1935, pp. 161–199, G. CONTENAU gives a detailed report of the results of the excavations during the years 1933–34, in Mesopotamia (Sumer and Akkad), Assyria, Iran, Asia Minor, Syria, Phoenicia, Cyprus and Palestine. The discoveries resulting from these excavations were abundant and the conclusion is drawn that it is now possible to make a rough sketch of prehistoric civilization in West Asia. The recent excavations have carried the beginnings of the monumental history of Mesopotamia back to the Jemdet-Nasr period. In respect to Canaan, the finds have been very enlightening. They indicate that the northern section of the country may be included in the large region which knew civilization producing painted ceramic work previous to the historic period. The archaeology of Palestine, which has never been placed earlier than the third millennium (third dynasty of Ur), can now, as can that of Mesopotamia, be studied in the Palaeolithic period.

The Tell Duweir Bowl.—F. MELIAN STAWELL, in a study of the Tell Duweir bowl and ewer, considers the three dots which follow MTN, "offering" as a representation of the numeral three. She derives Z from the Minoan double-axe; Peh (P), which can mean "the edge of a blade," she derives from the Cretan single-axe sign, "Pelekys," which she thinks explains the diverse forms of P in Semitic, Greek and Latin. Two characters on the ewer, which Father Burrows reads as *waw*, Stawell interprets as *gimel*, deriving the letter from the Cretan sign of a leg bent at the knee in which the heel becomes the side stroke of *gimel*. (*Palestine Exploration Fund, Quarterly Statement*, April, 1936.)

The Dead Sea.—All maps published prior to the war give the Conder-Kitchener Survey (1871–77) level of 1292 feet below the Mediterranean. The survey of 1914 under Captain Newcombe, which included the southern shore of the Dead Sea, gave a level of 1270 feet and definitely changed the form of the coast-line. The small island of Rijm el Bahr, which was twelve feet above water twenty-four years ago, is now completely submerged. The hammer-headed promontory at the south end of El Lisan shown on maps disappeared many years ago.

Recent Discoveries at Megiddo.—In *The Illustrated London News*, June 20, 1936, pp. 1108–1111, there is a profusely illustrated article on the discoveries at Megiddo during the 1935–36 campaign, by GORDON LOUD, Director of the Megiddo Expedition of the Oriental Institute of the University of Chicago. There have been several previous campaigns. During this season the mound was examined horizontally and vertically to determine the lay-out of the various cities and the relative chronology of the strata. The site was occupied continuously from about 2000 B.C. to its final abandonment. During some periods the city was protected by a fortification wall; the gate was always at the north. Private houses of the poorer classes were at the south. In the eastern part of the mound a small temple area of the Late Bronze Period has been located, adjoining another district of private houses of a better class. The large public buildings were situated near the gate.

The "Eastern Temple" was begun about 1500 B.C. and was destroyed during the conquest of the city by Tuthmose III. The deity worshipped here may have been "Resheph," a god of war, as many bronze figurines of him were found nearby. A unique clay model of a sheep's liver was found outside the floor. Several fragments of Egyptian statues of basalt and diorite were found built into a late reconstruction. A large building near the gate has not as yet been identified. It was built after the siege of Tuthmose III. An altar in one room may signify that it was a temple, but more probably the room was a private shrine. In a later temple, at the end of the eleventh century, a stone horned altar and cult objects were found *in situ*. A small limestone capital of the proto-Ionic type was also found in a stratum earlier than that in which the type was often employed. A great many house-burials were excavated, resulting in the discovery of a considerable amount of beautiful jewelry. Excellent stratigraphical evidence has been obtained from the pottery.

A Syrian Bronze.—G. HANFEMANN publishes (*Arch. Anz.* L, 1935, pp. 50–58) a statuette in Berlin. The contrast between the flat, meager body and the fully plastic head indicates a Syrian origin. A somewhat similar bronze, in the Yale University Collection, is shown. The Berlin figure probably came from Etruria. No other Syrian bronzes are known to have been found in Italy, though they occur in Sardinia. Oriental importations into Etruria seem never to be earlier than

the eighth century. That date, a late one for Syrian bronzes, is suggested also by the style.

ASIA MINOR

Caria.—In *R.A.* VI, series 6, 1935, pp. 152–163, LOUIS ROBERT gives an account of his second trip to Caria, which he made in the fall of 1934. He records his itinerary and reports his discoveries and conclusions. Certain conclusions are of especial interest. In Abbas (present-day Aydogdu), near the ruins of Sebastopolis, he found a dedicatory inscription to Julia Domna, a fragment of the base of a statue to a benefactor and another giving details of gifts to the gymnasium. In the south, Robert was able to fix a ruin near the village of Yorga as the site of the city of Kidrama, mainly by means of numismatic evidence. On the plain of Aci Badem he believes that he has determined the site of the Phrygian city of Kere-tapa-Diokaisareia. During his tour through the south, he was able to establish the locations of the cities of Kallipolis and Idyma, both of which had been previously identified falsely. In Mylasa he examined certain inscriptions already known, of which he notes: two epigrams, inscriptions of the gymnasium of the Νίκη Παρίου type, a fragment of a decree for a military chieftain, one Xenodamos, a fragment relating to constructions, and an inscription of the gerousia mentioning the cult of Drusus and of Marcus Vinicius. Robert believes that he is correct in ascribing this to the Marcus Vinicius who was consul in 19 B.C., the conqueror of the Dacians and Germans. In the village of Kuzyaka, Robert found two very interesting objects. In a well he discovered a fragment of a letter of a Seleucid official, addressed to a city, but unfortunately only the last eleven lines are preserved, making it impossible to ascertain the name of the author or of its addressee. Another find was a Carian inscription of the fourth century, which was rescued from a cistern outside of the village.

Discoveries at Karalar.—JACQUES COUPRY reprints an extract from a detailed report published on the discoveries made at Karalar in 1933, and which appeared, in 1934, in the *Türk Tarih, Arkeologiya ve Etnografya dergisi* (*ibid.*, pp. 133–151). This report was originally compiled by Remzi Oguz Arik and concerns the discovery of the tomb of the king Deiotarus, the Younger. The tomb is the first Galatian monument in Asia Minor which can be dated with certainty. It forms part of a group of similar tombs. A sort of

square chamber of Hellenistic style was found under the first *tumulus* to the southeast of the modern town. Despite the fact that it had been rifled at an earlier date, its yield included a gold necklace inlaid with precious stones, the remains of a golden diadem of floral design, a bronze *fibula*, and a *guttus* of the style of Pergamum. Two more funeral mounds were uncovered, one of which is that of Deiotarus II. Among the finds are: a table for offerings, a glass vase with golden ornamentation, gilded metallic pieces and fragments of purple stuff which may have been a funeral shroud. On the northern side of the *tumulus*, the excavators found a demolished altar of white marble, which was probably the property of a funeral cult, and in addition, fragments of a lion and a trophy, both of white marble. The fine Greek inscription found on this site attests without question the burial there of King Deiotarus II. This inscription is treated fully by Coupry in his study, which follows the extract from the Turkish report. One of its most valuable contributions is that it names the wife of the elder Deiotarus, Berenike, in apparent defiance of Plutarch who records her name as Stratonike. The third *tumulus* revealed another altar in a more complete stage of preservation, as well as bones, an iron-mail jacket, a remnant of a *caliga speculatoria*, and many fragments of golden torques bearing precious gems.

PARTHIA

Parthian amphora.—A. STRELKOFF (*Arch. Anz.* L, 1935, pp. 58-70) publishes a greenish-blue glazed Parthian amphora in Moscow. He dates it only between the third century B.C. and the first A.D. A series of drawings shows related Parthian forms. F. MASSOUL, in his study of the pottery of Doura, concluded that this glazed ware was made at Raqqa, and that is probably right; but he overestimates Egyptian influence on shape and glaze. The amphora was found at Olbia, which had considerable commerce with western Asia.

PERSIA

Persepolis.—In *The New York Times*, February 9, 1936, 2nd news section, p. 8, and in *The University of Chicago Magazine*, xxviii, Feb., 1936, pp. 23-25, the Oriental Institute of the University of Chicago announces the finding of inscriptions of Xerxes by its excavators at Persepolis. Translation of two inscriptions, as made by Professor Ernst Herzfeld, is given. The longer

inscription is inscribed in cuneiform in Elamite, Babylonian, and Old Persian, on stone tablets, apparently serving as foundation-deposits of the place. After the customary praise of the god Ahuramazda and the recitation of the king's titles, there follows a list of the provinces over which Xerxes ruled and the story of a revolt after Xerxes' accession to the throne; Xerxes suppressed it and supplanted the worship of the Daivas in the rebellious lands, by that of Ahuramazda. The inscription closes with an exhortation to men of later times to worship Ahuramazda and to abide by his laws, and a prayer to Ahuramazda to preserve Xerxes and his empire. Dr. John A. Wilson, Director of the Oriental Institute, infers from this that the Zoroastrian worship of Ahuramazda was of recent origin, and that the Vistaspa who became Zoroaster's convert and protector was in reality Hystaspes, the grandfather of Xerxes, as has been vigorously maintained and as vigorously denied by scholars.

The other document gives the extreme limits of the Empire of Xerxes; it was found in four copies, two on gold and two on silver, contained in limestone boxes at two corners of the audience hall of the palace. The text is identical with that of the gold and silver tablets found at Hamadan in 1926.

GREECE

GENERAL AND MISCELLANEOUS

An Offering to Enyalios.—In his excavations on the Larissa at Argos, in 1930, W. VOLLGRAFF discovered a small bronze plaque, which he publishes in *B.C.H.* lviii, 1934, pp. 138-156. This plaque was found in a mass of debris in the narrow space between the wall of the Mycenaean citadel and the existing Venetian castle walls on the east. It was among a large number of votive objects coming from the temple of Athena Polias, which had been thrown out in antiquity to make room for others. All of these objects, including this plaque, belong in the seventh or sixth centuries B.C., and are of small size. This plaque was intended to be suspended, and is decorated on both sides with incised figures. On the obverse is a horseman, moving to right, wearing a helmet but otherwise nude and unarmed, holding the reins in one hand and a goad in the other. The horse is long in body, with a tail that touches the ground. On the reverse, a nude, beardless man stands facing right, his left foot advanced, a spear in his left hand. His long hair falls along the nape of the

neck, and part of the head is missing. He resembles closely the figure of Achilles on a bronze blade from Olympia, which Furtwängler, as far back as 1884, assigned to the Argive school. On this side, in very deep incisions, is an inscription, in very archaic epichoric characters, which would belong in the end of the seventh century B.C., ΤΟΝΥΦΑΛΙΟΙΑΡΑ, which may be transliterated either as τὸ νυφαλίο ἰαρά (τοῦ Ἐνναλίου ἰερά) or τὸ νυφαλίου ἀρά (τῷ Ἐνναλίῳ ἀρά). Vollgraff is inclined to reject the first of these readings, and adhere to the second, which is quite as grammatical as the first. Ἀρά can mean "prayer" or "vow," the last meaning being rare, and occurring on seven inscriptions, which are listed and commented upon; they nearly always have the name of the divinity in the dative, as here. These inscriptions are all in the Achaean or Dorian dialects, and this meaning of ἀρά had gone out of literary usage in Classical times, although known to grammarians (cf. Schol. Aeschines against Ctesiphon, 116, and Harpocration, *Lexicon*, s.v. ἐξαράσασθαι). The form ἀρά is to be regarded as a survival of the Indo-European instrumental case, which had become an adverb. Vollgraff then discusses the general translation of votive inscriptions, and shows that ἀρά is synonymous with εὐχήν, and that both mean *ex voto*.

The cult of Enyalios, who was a war god, is very old. Solon built a temple to him at Salamis after his victory over the Megarians, and he was worshipped at many places in the Peloponnese; at Argos a temple in his honor, of remote antiquity, is mentioned by Plutarch, with the story of its foundation. No remains exist of such a temple on the Larissa, but his worship was doubtless associated with that of Athena, also a war divinity. Later he was merged with Ares, whose temple on the road to Mantinea, is described by Pausanias, and the site of which has been tentatively determined. In fact, an inscription from Hermione in the Argolid refers to Ἀρεὺς Ἐνναλίου, as an epithet of the god. Aside from this plaque, no *ex-voto* to Enyalios alone is known, except two epigrams of *Anth. Pal.*, belonging in the Graeco-Roman period, when offerings to Mars are common. To the Greeks, Ares or Enyalios was a god of murder, blood, and rapine, not a protector of soldiers, as the Roman Mars. Homer (*Il.* v, 890) makes Zeus call him "the most hated of the gods" and Sophocles (*Oed. Tyr.* 190-202) calls him "the god unhonored among the gods." In Sparta there was an archaic statue of Enyalios

in chains, rightly interpreted by Frazer (Ovid, *Fasti*, II, p. 105) to paralyze him and keep him in a state of peace. Nevertheless, Ares remained one of the twelve great gods of Olympus. The plaque is interpreted as accompanying the offering of two soldiers of the objects that saved their lives in battle—a helmet and a spear. It is also possible that the horse of the mounted man may have been offered also to the god. At the end a comparison is made with a vow of the inhabitants of Orneai to the Pythian Apollo, recorded by Pausanias.

Furnishings at Delos.—Under this heading, W. DEONNA in *B.C.H.* lviii, 1934, pp. 1-90, devotes a long article to ancient tables of offerings, with shallow receptacles for different kinds of fruit, and to a Christian altar table. He calls attention to the discovery at Delos of a number of small plaques of tufa, limestone, or marble, with five small circular or rectangular depressions hollowed out, one at each corner and one in the centre. The rims of these bowls are in relief above the surface of the plaques. In two instances that in the middle is larger than those in the corners. One was found in the Hall of the Bulls, another in a private house. There is no record of the provenance of the others. A list of five is given, without illustrations. The writer considers them to be tables, and takes up the evolution of the use of tables for eating. The primitive form, without feet, remains as a table of offerings to a god, owing to the conservative nature of religious practice. Very early the table is given feet, at first low, later higher; when rectangular it received four, when round, three—later reduced to a central leg in each case. Meats or fruits were placed in vases, or, as in this case, the receptacle was hollowed out of the table itself. In some cases the receptacles are replaced by reliefs portraying food, especially in Egypt. Tables also exist with holes, in which vases were meant to be placed; some of these have also been found at Delos, and are illustrated. Tables used for religious rites are in no sense different from those used by individuals in private life; but in some cases they take the place of the altar itself. Placed beside a grave stele, for offerings to the dead, they evolve into the funerary altar. Tables similar to those from Delos have been found on Roman sites in North Africa; numerous examples are illustrated, and a more or less complete list is given. Placed originally beside a grave stele, and with no inscription, they end, in the fourth century A.D., by superseding the stele, and

being inscribed. This custom of tables of offerings in North Africa antedates the Roman conquest, as is proven by Punic examples, found at Dougga, almost exactly like those from Delos. But while the Roman tables are all funerary, those from Delos are probably not, as, after 426 B.C., it was not permitted for anyone to die, or be buried, on the island, but a dying person had to be taken across to Rheneia. Like the Delian examples, the Punic tables do not seem to be connected with death, and also contain five receptacles, arranged in the same manner as at Delos. But in the later periods at Delos, it was customary to use the burial material from Rheneia for construction purposes, especially in the Christian period. We cannot really determine the exact use of these tables of offerings—whether for the service of the gods, or the cult of the dead. They cannot be earlier, in Deonna's opinion, than the third century A.D. These objects are undoubtedly of Semitic origin, as the large population of Semitic peoples in Delos is well attested, dating back from the third century B.C., or the end of the fourth, and persisting as long as Delos was populated.

Associated with these tables is another object at Delos—a marble block with an inscription, consecrating to Serapis, Isis, Anubis, and Aphrodite a staircase and walls. It dates about 158 B.C., and was re-used and re-shaped at a later time, when a rectangular bowl was hollowed out in front of the upright face of the block to form a libation table.

There are also two miniature leaden tables at Delos, which were undoubtedly *ex-votos*. One was found in the House of the Dolphins, the other in the quarter southeast of the Lake, and are imitations of tables of offerings.

These tables from Delos and North Africa have many parallels in the Semitic East, especially in Petra, where they are very common, and resemble the African ones very closely. The hollowed cups are often, as in Africa, in groups of three. Some show analogies to Hittite and Minoan objects. These tables are also very numerous in Canaan, and date from the Neolithic era down to modern times; they have different uses, for collecting water, washing clothes, preparing olive oil or wine, or for use as mortars; many, however, are religious, for libations to the dead. Others are for libations to gods, as at Megiddo. But *portable* tables of this kind have also been found in Canaan, dating from the end of the First Semitic period down to Hellenistic times. One of these is exactly like those found at Delos. Similar tables are found in Hittite

sites in Upper Syria, and at Carchemish. Here, groups of three cavities are found, exactly as at some sites in North Africa and Minoan Crete. Other examples in Elamite and Assyrian art are listed.

The Egyptian tables of offerings are next described, and their resemblances to and differences from the others noted. At Sinai we see the introduction of tables of offerings like those of Minoan Crete, in conjunction with those of Egyptian type.

Deonna then discusses the tables of offerings found in Crete, and particularly those from Mallia, which Chapouthier believes show direct Hittite parentage, neglecting the possible influence of Egypt. Chapouthier believes that the Minoan tables of offerings are for the worship of an Earth goddess, in which he agrees with a previously expressed opinion of Dussaud; but Deonna makes certain reservations to this statement. Primitive tables of offerings (stones with cups hollowed out of the rock) have also been found on the mainland of Greece, at Sesklo in Thessaly, Dendra, and elsewhere; these may antedate the Minoan period, but in Crete they develop more freely, and take two forms—the rectangular, and the round, or plate form. A number of these tables, found at Mallia and elsewhere in Crete, are described and illustrated. At Phaestos, one of these tables, instead of having cavities hollowed out of the surface, has a number of vases attached to the rock, — which was done much later also, in Graeco-Roman times. After listing the rectangular examples, Deonna lists and illustrates some of those of circular, plate-like form, from various Cretan sites. He rejects Chapouthier's theory that the Earth-Goddess was also the goddess of the dead, and states that these tables of offerings played a rôle in the cult of the dead, separate from their use in the worship of the goddess. It is not certain whether the offerings of first fruits (honey, wine, etc.) were deposited directly in the hollowed-out cavities, or if vases were inserted in them to hold the offerings. Some of these tables bear traces of fire, and have been considered to be hearths, as well as tables of offerings. One round table, of Prehellenic origin, has been found at Delos in one of the houses of that period on the slopes of Cynthus; it has three short legs, and is therefore related to similar objects from Knossos and other sites in Crete. At Sesklo and Koumasa have been found miniature tables of terracotta, to which small vases are attached. A list of the various

types of tables of offerings, found in Greek lands from Prehellenic sites, ends this part of the paper.

These Prehellenic tables of offerings have been compared with the curious vases called *kernoi*, and Deonna believes that they go back to a common prototype. Originally, perhaps, borrowed from the East, the *kernos* persists into Classical times, where it is especially used in the cult of Eleusis. It is also found in North Africa, in Punic and Roman times; and a form of *kernos* is still used in the Greek Orthodox Church. The little receptacles on these vases were always used for the first-fruit offerings (oil, wine, grain, etc.). Although examples with the vases in linear form are known, the circular type of *kernos* is the most often found. Some are in the form of tables with three or four feet, showing their evolution from the common table. *Kernoi* of various sorts have been found all over the ancient world.

In Hellenic times, tables of offerings were used, placed beside the altar of a god, or the grave of the departed. Sometimes the table was also the altar, and sometimes took the place of a grave stele. In the fourth century B.C., by order of Demetrios of Phaleron, only the most simple types of monuments were permitted, and tables of offerings were thus retained. They go back in their simplest form to the very archaic periods; the famous Rhexanor inscription of Thera, dated by the writer in the seventh century B.C., was carved on a table of offerings without feet, of which others of the same period have been found in Thera. Similar footless tables are found in Attica and Boeotia, and served also as funerary altars; some originally had stone lekythoi attached to them. Here Deonna publishes a white lekythos showing such an arrangement. Other tables with feet are also listed and published, either rectangular or round. Most of these have a plain surface, but there are a few, from Epidaurus and Eleusis, which have small cavities hollowed out, as seen elsewhere. Certain white lekythoi have designs of altars ornamented with disks, which remind Deonna of the cavities in tables of offerings. Nevertheless, tables of this kind are extremely rare in the Classical period in Greece, and the only object really resembling them comes from Thera, and probably dates in the Ptolemaic period, when the island had an Egyptian garrison.

The table of offerings is found in Early Christian times, when love-feasts in honor of the dead, especially of saints and martyrs, were held. Ex-

amples of the tables used have been preserved. They have no feet, and have either cavities for offerings, or relief designs of meats, etc. The Christian table of North Africa is also a true altar, —in fact, the Christian altar is derived from the table, so that it is not surprising to see the ancient table of offerings carried into Christian worship. It often takes the form of the *stibadium*, or "sigma," which was adopted in Rome at the end of the Republic. Tables of this form are shown in Early Christian mosaics, and a number of *sigma*-tables have been found at Petra, obviously used for cult purposes. There are also Christian examples in North Africa, Egypt, and various sites in Greece. The *sigma* form of table persists in some of the monasteries of the Greek Church, such as the Lavra at Mt. Athos.

These altar tables, while for the most part without ornament, have sometimes niches on the edges, usually twelve in number, one for each of the disciples of Jesus. Some of these are dated by Strzygowski in the fourth to sixth centuries A.D. Examples are found at Salona, Ephesus, and especially Corinth, where the American excavations have yielded a good many, which may be later in date. This form of niche, carved on the table-top is found not merely on the *sigma*-tables, but on circular ones as well, deriving their form from the ancient round table. Such examples are found at Besançon in France, and at Lesbos. Deonna then publishes a table of this kind, found at Delos, in the ruins of a Christian church, which had been built in the Hieron. This table has ten niches. Rectangular altar tables of the Christian period also exist and gradually supersede all other forms. The table at Delos is dated by Deonna not later than the seventh century A.D. The niches in these tables are, according to him, survivals of the cavities in the primitive tables of offerings, and the multiple vases of the *kernoi*.

Continuing his studies on this subject (see *B.C.H.*, lviii, 1934, pp. 1-90) W. DEONNA, in *ibid.*, lviii, 1934, pp. 381-447 (53 figs.) discusses what he calls Horned Altars (*βωμοὶ κεραυνοῦχοι*). These altars are found on Delos in Egyptian sanctuaries, and are rectangular in form, ornamented at the four upper angles with protuberances resembling horns. Sometimes they are hewn out of the same stone as the rest of the altar, sometimes carved of separate pieces and dowelled to the altar. On these altars, as is proven by a Delian inscription, incense was burned. Attention was first called to them by Roussel. A list is given;

there are four with attached horns, and six with the horns carved out of the same stone as the rest. In addition, two small portable incense-burners have the same motif. Sometimes these objects in Egypt bear the uraeus of Isis. The Delian examples of this type can be dated in the second century B.C., or the beginning of the first, but not later, as the sanctuaries of the Egyptian gods were destroyed in 88 B.C. In Egypt itself these altars are rare, only four examples being listed. But four other representations on works of art are also given. In addition, eight representations occur on faience vases, dating from the Ptolemaic period. There are also three wall paintings, two from Herculaneum and one from Pompeii, on which horned altars are shown.

A series of small incense-burners is next discussed, which imitate these large altars in shape. They are of stone, bronze, or terracotta, and are also represented on other works of art. All come from Egypt, or attest their Egyptian origin in some way. No matter what shape the base may take, they are surmounted with a rectangular flat top, with four horns at the angles. Sometimes the horns meet at the bottom; sometimes there is an interval, which may be empty, or supplied with a small tooth-like object. The horns themselves may be pointed or rounded. Of those with horns which join at their base, thirteen are listed; of these with an empty interval, ten; of those with a tooth between the horns, fifteen. In addition, there are three variants which do not fall into these classifications, five of which have arrangements of horns not known to the writer and two which are incomplete. These objects were used only for burning incense, and are particularly associated with the cult of Isis, either in temples or homes, or in the cult of the dead. They do not appear before the third century B.C., and persist in Egypt into the fourth and fifth centuries of the Christian era. Their late appearance in Egypt suggests an outside origin, and it has been suggested that the form comes from Syria, where they are of very frequent occurrence.

In Syria, however, as in Egypt, they are particularly common in Hellenistic and Graeco-Roman times, and persist into the Christian era. But examples of even earlier date are found, there being a possible instance at Gezer dating about 600 B.C. There is also a representation of such an incense-burner on a Phoenician bowl from Idalion in Cyprus. "Horns of the altar" are frequently mentioned in the Bible, e.g., Amos, 3, 14, dating

about 700 B.C. Deonna gives a list of Syrian examples, classified as follows: with horns joined at the base, eight; with horns separated, fifteen; with horns separated by a tooth, eleven; and one with horns with an intermediate step. They are almost equally common in Arabia; Deonna lists twenty-six instances, divided as follows: horns joined at the base, eight; horns separated, eleven; different specimens, the disposition of the horns unknown to him, seven. Two series of Persian coins show the horned altars, and four examples, either actual or represented on monuments, have been found in Cyprus. It is possible, perhaps, that all of these go back to an Assyrian origin; certain Assyrian reliefs are published, which would seem to show a similar monument portrayed on them. On the other hand some scholars may consider that the Minoan "horns of consecration," examples of which are shown, are the prototype of the Semitic horned altars, but it is also possible that Crete got the idea from the East.

Turning westward, we find the incense-burner in the form of the horned altar in Punic and Roman sites in North Africa—four examples are listed. It appears in Italy also; examples from Pompeii and Herculaneum are to be seen in the Naples Museum, and many other specimens from Italy are known. They are found also depicted on cameos, reliefs, etc. In all, thirteen items are numbered, but in several cases a number will include more than one specimen. Horned altars appear frequently on Roman coins, particularly in the later Imperial period.

Returning now to Delos, we find altars of this type, represented on Roman reliefs, and two small altars found in the synagogue attest a Syrian origin. Less pronounced horns are seen on eight small incense-burners, found on different parts of the island. Analogous examples have been brought to light at Thera, and Athens; on Hellenistic vases, and on coins of Crete and Asia Minor, where Egyptian and Oriental influence was noteworthy.

Deonna next takes up the normal Greek altars. These are often surmounted by plain upright blocks, which would appear to have been the form of the altar of Apollo at Delphi. Others are capped with acroteria supported on volutes, or by plain volutes like an Ionic capital, or sometimes isolated volutes, springing up and away from the altar. In some instances this latter class of volutes are not unlike small horns, and have a purely accidental resemblance to the Assyrian horned

altar. Most of our knowledge of the Greek altar, however, comes from representations on vases, and consequently cannot be used to prove or disprove an Oriental prototype. Still others are ornamented with acroteria at the corners, in the form of palmettes; to this class belongs a little terracotta incense-burner found at Delos, already previously published, but republished here, which is ornamented with palmettes and volutes at the angles of the top, and with reliefs on the sides. Deonna attributes this example to a maker in Greece proper; Willeumier, who has also published it, assigns it to a factory in Tarentum, dates it in the first quarter of the third century B.C., and sees in the projecting acroteria traces of Egyptian influence. This Deonna denies, believing the palmette design to be derived from the Hellenic altars.

The significance of the horns on the altars is next discussed. There was undoubtedly some ritual significance, and it was doubtless for this reason that the trays held by worshippers or bringers of offerings, as pictured on Greek vase-paintings, are provided with projections like horns. Early altars were doubtless made up of charred remains of the victims sacrificed in a sacred place, then a permanent altar was built on these remains, and horns of victims attached to it. An example is given in the altar depicted on the Caeretan Busiris vase in Vienna, attached to which rams' horns are shown. Then these objects are carved on the altar itself, to symbolize the real horns, which is the origin of the boukranion on Roman altars. In the case of the truly Greek altars, which are derived from gables with acroteria, or from Ionic capitals, the existence of horn-like objects may safely be laid to outside influence. But in the case of the Egyptian and Syrian horned altars Deonna believes that they, too, derive from an architectural origin. The tooth noted in many instances between the horns recalls a gable between acroteria. It can be supposed that the horns are nothing but exaggerated acroteria. These acroteria are possibly inspired in the Orient by the crenellations surmounting towers, walls, and ramparts. In conclusion, it is admitted that the Egyptian horned altar derives from Syria, which in its turn imitates a type found farther East, that repeats a crowning motive in local architecture. If we still call them "horned altars," let us not forget that they are really altars with acroteria, just as in the case of the purely Greek altars. The proof is suggested by a second

class of altars, with stepped decoration at the angles, a discussion and list of which forms the second part of the article. These altars appear already in Sumerian and Chaldaean art. The comparison of this design surmounting the altar-base with the ziggurat has been made. It appears as a decoration on the friezes of Hittite, Assyrian, and Phoenician and Persian walls, and, while some have seen a cult significance in this decoration, it is really derived from crenellations that surmount walls and towers. The stepped design persists into Sassanian Persia, and appears on wall-tombs of the Roman era of the first century A.D.

The Assyrians decorated small altars with these crenellations—both actual specimens and representations on works of art are given, attesting the Assyrian origin of this type. It appears also in Phoenicia, Persia, and Prehellenic Thessaly, where it is found on altars and as a design for vases. It does not appear again until Roman art, where it is common, showing the increasing influence of the Orient. Finally, two little altars of this type, found on Delos, are published, one of which, coming as it does from a synagogue, is proved to be of Oriental origin.

A New Type of Heating Apparatus at Delos.—

The excavations at Delos have yielded numerous fragments of terracotta heaters, in which charcoal or wood was burned, either for use in heating houses, or for cooking. Two types have hitherto been recognized; a third, for which the name of *χυτρόπους* is suggested, is described by G. BAKALAKIS, in *B.C.H.* lviii, 1934, pp. 203-217. This type is also of terracotta; no example is completely preserved, but a restoration can be made. A high, cylindrical foot supports the fire-box or hearth, which is elliptical in form, and is provided in front with a flat shelf of trapezoidal shape. This shelf extends out from the foot, and is supported by strong braces, branching fan-wise from the top of the foot. It has a slight wall, and its purpose was to hold the ends of the sticks of wood that burned in the fire-box. The hearth itself has a much higher wall, the top of which has a flat band of horse-shoe shape to support the pot or receptacle to be heated. Behind this was the chimney, curving outward from the foot, to balance the weight of the shelf on the other side, and maintain the centre of gravity. These heaters were portable; lugs for carrying exist on many fragments of feet. A list of extant fragments of this type is next given, nineteen or twenty in all. The object was to apply heat to the bottom of the

receptacle, and to provide a draught, which was assured by the arrangement of the chimney. The writer compares with it the group of ovens or stoves, found in a house in the Quarter of the Stadium at Delos, and calls attention to a terracotta pipe found in the House of the Dolphins, which he believes was used to let out smoke from the house. All the fragments are of coarse clay, but well made. Some had a yellowish slip. The different parts were made separately, and attached together to form a whole. These heaters are dated from the end of the second century B.C. through the first half of the first. The article ends with the publication of one or two of the pots which were used with these heaters.

Hamburg Museum.—E. VON MERCKLIN in the *Arch. Anz.*, 1935, pp. 70–159, publishes a full catalogue of the antiquities acquired by the Hamburg museum since the previous report appeared in 1928. Notable objects or discussions include: stoppers in vases; a ram vase; terracotta brazier handles; bronze vulvas; antique objects with Christianizing additions; divers things in bronze and glass. Also there are numerous supplemental notes to the 1928 report, including: almond vases; mussel vases; tortoiseshells; half-masks covering the upper part of the face; and a kylix by the Briseis Painter.

Metal Work.—W. ZÜCHNER will publish, in *Ergänzungsheft* xiii of the *Jahrbuch*, a study of Greek metal work in the fourth century. A note by him on the subject appears in *Arch. Anz.*, 1935, pp. 365–373. His material consists chiefly of mirror-covers and hydrias. The subjects are almost limited to Aphrodite and Eros, love scenes, and Dionysiac scenes. Four centres of production are distinguishable: Chalkis, Corinth, Tarentum, and a fourth somewhere in the Greek east. In each case the centre is determined by the places in which a few were found, and others are grouped by stylistic similarity.

An Unpublished Weight in the Kambanis Collection, Athens.—In *B.C.H.* lviii, 1934, pp. 506–511, P. LEMERLE publishes a round leaden weight, 88 mm. in diameter, bearing the name of the agoranomos who issued it. Its provenance is unknown. Lists of weights with names of agoranomoi have been made by different scholars, the latest of which is that by Michon (*Daremberg-Saglio*, s.v., *pondus*). To this list many additions can be made, and a list of six is given, all in the Numismatic Museum in Athens, and three of

which have never been published before, which are to be grouped with the Kambanis specimen. Where a provenance is known for the weights here listed, it is Smyrna.

GREEK ARCHITECTURE

The Treasury of the Athenians at Delphi.—Under this title, P. ROUSSEL contributes a note, in *B.C.H.* lviii, 1934, p. 518, acknowledging the participation of the eminent Greek architect, Balanos, in the restoration of this building. M. Balanos had sent him some letters from the late Th. Homolle, in which he had expressed his indebtedness to Balanos. At the time of the recent publication by Audiat of this building in the *Fouilles de Delphes*, both Homolle and Replat, architect of the French School, were deceased, and in the available records, no reference was made to Balanos. This will be remedied in the next fascicule of the *Fouilles de Delphes*.

The Vitruvian House.—The house in Delos with mosaics showing masks has been published as an insula including four distinct dwellings. From ways of communication between them, decided differences in luxury, and other indications, it appears that all parts belong to a single residence, the largest and most splendid in Delos. It corresponds to a great extent to the Greek house as described by Vitruvius (vi, 7). In the gynaikonitis, the stable, the thyroron, and the court with columns on three sides are recognizable, and an exedra on the east corresponds to the "pastas" on the north of Vitruvius. The largest court, of the "Rhodian" type, belongs to the andronitis, which has its own entrance. The garden of Vitruvius is replaced by an area occupied chiefly by a cistern. The remaining two sets of rooms are "hospitalia," guest quarters, though singularly meager. Two plans show how slight are the modifications necessary for complete correspondence with Vitruvius. The author describes a megaron with prostas in the gynaikonitis, a peristyle with andron in the andronitis. The former, known from prehistoric times and appearing at Priene, is retained by Vitruvius in a subordinate place; the latter appears first at Olynthos; the house of the mask-mosaics represents a step beyond Vitruvius, in that the older type is eliminated entirely. The Delian type of house is probably of Athenian origin; this, probable a priori, is indicated also by the complete similarity between fragments of wall decoration found at Athens and at Delos. (A. RUMPF, *Jb. Arch. I. L.* 1935, pp. 1–8.)

GREEK SCULPTURE

Modern Reproductions of Ancient Bronzes.

—A bronze Zeus in Weimar (published *Röm. Mitt.*, 1930, pp. 1 ff.) is closely similar to another, recently transferred from the Hohenzollern Museum to the Antiquarium in Berlin. The Weimar piece is slightly smaller and is artificially patinated; this and other evidence prove that it is a modern cast, the other Zeus being the model. The base of the Weimar figure bears the signature of "J. Dinger aus Solingen," who made it. It is mentioned in the published notebooks and letters of Goethe, who says that the original was found "in den Niederungen der Oder." Probably it is the "Jupiter Hastatus" which was found in 1810 near Freienwalde and acquired by the Crown Prince of Prussia. It seems to be an eclectic work, Hadrianic or later. Four bronzes, made in the same way from an antique bronze Poseidon with raised foot, are illustrated. Perhaps Dinger and his patron Beuth were involved here also. (K. NEUGEBAUER, *Arch. Anz.*, 1935, pp. 321-334.)

Funereal Banquet Reliefs.—E. PFUHL and A. SEYLAZ remark on three of these (*Arch. Anz.*, 1935, pp. 11-20). One is a monument dedicated by Harmonia for her husband and son, both named Aias. She appears three times: once alone, once with her husband, and once, on the couch, with husband and son. The relief is rude and belongs to the second century A.D. On a Rhodian sepulchral altar a banqueter is asleep or dead; the standing woman is different in style and later; the relief was made when the man died, ca. 150 B.C., and the wife was added after her death, some decades later. In her place there may have been a wreath originally. A third relief, found near Smyrna, is a combination of two types. It contains a man on a couch and a second man, standing, of a type proper to a class of horseman reliefs. Here the horse is represented only by the head, and the standing man is placing a wreath on the banqueter's head. The relation of the two men was probably explained by an inscription on the base; the inscription on the piece itself is later than the relief, which belongs to the second century B.C.

Parian Sculptors.—O. RUBENSOHN (*Jb. Arch. I. L.*, 1935, pp. 49-69) assembles evidence for a number of Parian sculptors. A signature of Boulis, ca. 150 B.C., indicates that he made a part, "from the Eros to the Herakles," of some composition in relief. Aristandros, Antiphanes, Protogenes, Ath-

enaios, Antiochos, Xenon, Sogenes, and two Cossutii, all of the first century B.C., are known by their signatures; there is also a signature of which only "Parian" remains; and Pausanias mentions a Kolotes as a Parian and pupil of Pasiteles. These men worked chiefly in the islands, most of all in Paros itself, where other inscriptions indicate an abundance of sculpture in their time. Some of their works were in Italy. A replica of the Antiphanes statue was found in the Antikythera wreck; all its marbles were from Parian quarries and probably were carved in Paros. In sculptures found in Paros, even small ones, the marble is frequently pieced. Proxikles, a Parian of the Augustan period, was honored once with a marble statue and later with a bronze one; apparently the latter was considered a nobler monument. The Parian would make copies from casts, made from moulds imported from Athens, Delos, etc.; and certainly there were some earlier sculptures in Paros itself. A small figure found there resembles the imitations of the Kybele of Agorakritos and the fragments from the Nemesis base; it is derived from a Demeter of Agorakritos, which is imitated also on a Parian coin probably of the first century B.C. A Parian Sosthenes, of the same period, dedicated a monument to Archilochos; in appearance it would resemble certain Parian tombs, and on it would be a statue of Archilochos. This statue is probably imitated in a coin-type, in which the poet is seated, beardless, with a lyre and a book-roll; evidently the statue was a modification of an Apollo.

Pergamene Frieze.—W. VON MASSOW discusses and illustrates a group reconstructed, not quite certainly, from fragments of the great frieze of the Pergamene altar. A goddess is thrusting a torch into the face of a snake-legged giant, who pushes it aside with his hand. There is no place for the new group on the north or west side of the altar; perhaps it belongs on the east, behind the winged chariot. (*Jb. Arch. I. L.*, 1935, pp. 70-77.)

Photographs.—Photographs of sculptures in the round are often misleading; there is particular danger of having the camera too close. Photographs of the head of the Olympia Apollo, taken at distances of one, two, and five metres look very different; only the last is satisfactory. New and superior photographs of the Dipylon Kouros are shown. The New York kouros is genuine. The Dipylon is older and finer, the Sounion contemporary but different; no two of them are by the

same man. (G. RODENWALDT, *Arch. Anz. L.*, 1935, pp. 354-364.)

Portraits.—J. F. CROME (*Arch. Anz. L.*, 1935, pp. 1-11) illustrates a new example of a portrait type identified by Poulsen, with general assent, as Hypereides. It belonged to a seated statue; chiton and himation were worn, the head was well forward. In a double herm in Compiègne this is joined with a female head. The style indicates a date around 300. Hypereides, an orator, should be portrayed standing, and the combination Hypereides-Phryne is improbable. The pair should be Arete and one Aristippos; she was daughter of the elder and mother of the younger. In only one other herm are male and female portraits joined; the subjects should be Krates the Cynic and his beautiful pupil Hipparchia.

GREEK VASES

A Kylix in Milan.—In *R.A. V.*, series 6, 1935, pp. 200-204, GISELA M. A. RICHTER contributes to H. Philippart's study made in *R.A. I.*, 1935, pp. 154 ff., of a cup in the Brygan style in the Castello Sforzesco in Milan. Philippart described a building at the left in the picture as a "construction en quelque sorte chevelue" and suggested that it might be an oven on which the woman in the representation was about to place a metal bucket which she held. Wiegand, still earlier, interpreted it as a thatched wall on which the bucket is to be placed. Richter disagrees with both suggestions, and discusses a second instance of the odd structure on a kylix in Florence. The scene is the same. A woman is drawing water from a well or cistern. The pail has been let down and she is holding the rope with both hands. The upper end is knotted. In the background are a fruit tree and the structure in question. Miss Richter points out two important facts which are to be drawn from the scene on the Florence cup: (1) the tree indicates that the scene is out of doors; and (2) the knotted end of the rope is the upper one, for the lower one is down in the well. Miss Richter reports that recently, while in the Argolid in Greece, she saw structures identical with the one under discussion. They are sundried brick walls covered with wild thyme or dried branches and are used for roofless enclosures. She concludes that in the Milan and Florence representations the structures are such and that in the scene on the cup from Milan, this structure serves to indicate the locality of the scene as does the fruit tree in the other representation. In the

picture in Milan the woman holds the pail in one hand and one end of the rope in the other. It is the lower end, for the upper one is on the ground, knotted, as in the Florence kylix. Below her hand are three arcs indicating another knot which in turn would indicate that something was tied to the upper end of the rope. Miss Richter points out that it was the metal hook which was fastened to the bucket for letting it down the well and cites a passage from Aristophanes' *Ecclesiazusae* in support.

An Oinochoe in the Vlasto Collection, Athens.

—In *B.C.H.* lviii, 1934, pp. 281-290, CHARLES DUGAS publishes through the courtesy of M. Vlasto, a red-figured oinochoe in his collection, attributed by Beazley to the Eretria Painter, and therefore belonging in the period 430-420 B.C. (The writer is planning a study of the oinochoai of this type.) In the middle of the design is a seated youth, three-quarters to right, a spear in his right hand, talking to a woman at the right, who stands in front of him. Behind him is another youth, who holds up his draperies with his left hand. Dugas interprets the scene as the mission to Skyros, after the death of Achilles; the seated youth is Neoptolemos, the woman Deidamia, who has just learned of Achilles' death. This story was told in the *Ilias Mikra*, and, about the time of this vase, was the theme of the lost play of Sophocles, the *Skyrians*, from which Dugas believes this vase is inspired. The other youth, therefore, he interprets as Acamas or Demophon, sons of Theseus. This subject is not frequently depicted on vases: the only one surely showing it is a krater in the Louvre, where the figures are inscribed, attributed to the Chicago Painter. Other vases which have been assigned to this subject are a kylix in Corneto-Tarquini, attributed to the Brygos Painter, and a stamnos in the Hermitage, attributed to Hermonax; both of these vases, however, deal with Achilles and the daughters of Lycomedes. Another krater in the Louvre, and an amphora in New York, attributed to the Lykaon Painter, may show this subject, but it is doubtful; and an Apulian amphora in Florence may also be included. The closest parallel to the Vlasto oinochoe, however, is an Apulian krater in Lecce of which a photograph is published. In the *C.V.A.*, it is called Odysseus carrying the armor of Achilles, but Dugas sees in it an almost exact repetition of the scene on the Vlasto vase.

Nekyia.—P. FRIEDLÄNDER (*Arch. Anz. L.*, 1935, pp. 20-23) remarks on the Nekyia Krater

in the Metropolitan Museum. It reflects great painting. In the upper zone there are two groups of figures without inscriptions. In the group of two, occupying the space toward which Pluto and Persephone turn their backs, are two living men, preparing the "strosis" on which a corpse would be placed. In a group of three, the woman has a band under the chin such as would be placed on a corpse; the three are contemporary dead. These and the named figures are all in the field dominated by Pluto and Persephone. Meleager looks feeble, as he was during his later life on earth. Apollodoros presents Herakles encountering Meleager. Hermes, Theseus and Perithoos in the lower world; the same group appears on the krater. Probably there was an epic source. The other named figures are Palamedes, Elpenor, and Aias, all of whom met their end through Odysseus; Pausanias mentions a somewhat similar group painted by Polygnotos. Painters, great and small, followed epic rather than contemporary thought in their versions of Hades.

Pre-Kertch Style.—H. SCHOPPA (*Arch. Anz.* L. 1935, pp. 33–50) lists three red-figured vases in which the sandal binder of the Nike balustrade is imitated, and four imitated from the bull led to sacrifice, also of the balustrade. Doubts of a definite connection are not justified. In two of the second group and in others painted around 400 B.C. a torch-race is represented; in 421/20 the torch-race acquired importance in the Hephaistia. Contemporary with the Meidian style was another, represented by the Shuvalov, Pothos and Jena painters, in which less effort is made to give an effect of plastic modelling by means of the lines in the drapery. It is this manner that leads to the Kertch style. Artistic personalities are harder to distinguish from 400–375 B.C. than earlier or later. A list of attributions to the Oinomaos Painter is given, also a list of related works. Various matters in connection with vase-painting preceding the rise of the Kertch style are discussed.

GREEK INSCRIPTIONS

Amphictyonic Law.—In *R.A.* V, series vi, 1935, pp. 205–219, GEORGES DAUX makes several contributions to the text of the amphictyonic law of 380 B.C. Of especial interest is his discussion of a reading in line 14, in which asses seem to be mentioned as victims for sacrifice. Daux points out that there is no evidence in support of the assumption that these beasts were used in sacrifices by

the Greeks. However, he constructs a convincing case for the reading *τοὺς ὄνους*. He gives consideration to the reading *τοὺς ὠνούς* but rejects it on the grounds that it is both Homeric and epigraphically impossible. He decides for the reading *τὸ ἔθνος*, which he considers highly probable in view of its frequent occurrence in such laws. He cites amphictyonic decrees of the second century B.C. in which *ἔθνος* is used in association with *πόλις* and then shows that *πόλις* is found in line 40 of the law under consideration.

In *B.C.H.* lviii, 1934, pp. 291–380 (28 figs.) ALFRED LAUMONIER publishes forty-four inscriptions discovered by him on a journey in Caria in 1933. All are in Greek. Four were found in the region of Alinda and Alabanda, seven are from Mylasa, three from Kindya, two from Labraunda, seventeen from Stratonicea, two from Almadjik, three from Ula and Pisiköy, and six from Hyllarima. Of these inscriptions some are of very little importance, but the following are the most significant.

No. 1 from Alinda consists of decrees, which are considered the earliest known decrees of the city, dated about 202 B.C. A long commentary is given. No. 3, also from Alinda or Alabanda, is a dedication in honor of a certain Aristogenes, priest of the Health and Security of Caesar, and is dated in the time of Augustus. No. 5, from Mylasa, gives decrees in honor of judges, and is accompanied by a long commentary, showing that the inscription copies at least three decrees. Its interest consists principally in the identification of the cities that were under the jurisdiction of these judges. No. 7, also from Mylasa, is a fragment of two honorific decrees, with a tribal list on the reverse side. No. 17, from Eski-Hissar, or Stratonicea, a rectangular stone with fragmentary inscriptions on three sides, dates perhaps in the first century B.C., and deals with the judiciary life of the place; and no. 22, from the same site, is a dedication on an altar to Theos Angelikos, which the writer believes to be a probable assimilation of the Jewish divinity with Zeus and Hecate.

By far the most important inscription published is no. 39, from Mesevlé. (See pp. 345–376). It was found in a field, half an hour's distance from the modern village of that name, and is now in the local school. It bears several inscriptions. On the front side are two columns, called A and B, and on the right side another inscription, C. One of the inscriptions, at the top of columns A and B, is in the Carian tongue, and is made up of an

alphabet of native and Greek characters. The sounds expressed by these symbols are not exactly known; but Laumonier, relying on the previous work of Sayce and Sundwall, attempts a transliteration of this Carian text, and discusses the different characters shown. He then attempts a possible interpretation of the text, suggesting that it consists of a series of patronymics. A date in the fourth century B.C. is given, both for the Carian text, and the Greek inscription in col. A beneath it. Column B has, below the Carian text, a contemporary Greek inscription of four lines; and below that a twenty-line inscription of the second century B.C. These Greek inscriptions are studied together, and a commentary is given, line by line. The importance of this inscription is great; it confirms the identification of Meselyé as Hyllarima, which had been up to that time hypothetical; it increases the list of sales of priesthoods, and shows which deities were grouped under the same priest-hoods; and it can be dated with some accuracy in the second century B.C., showing the domination of Rhodes at that time over this region far in the interior and away from the sea.

Previously for the identification of Hyllarima we had only a passage from Stephanos of Byzantium; there were no coins of exactly known provenance, and only two inscriptions, both of other localities, in which the name of Hyllarima is mentioned. This site, after being at different times falsely identified with other ancient cities, is now assured as Hyllarima. The inscription shows that the place was a *koinón*, or union of small villages around a larger town.

The matter of the priesthood "of all the gods" is next discussed. In the fourth century B.C. Hyllarima must have been a small place, and may well have had but one priest for the entire pantheon, or only one temple, consecrated to all the gods. Altars dedicated to all the gods appear, however, in other places, and sanctuaries also, which are found in the archaic period, and also in later times. In other places, too, priests "of all the gods" are found. The conclusion is reached that in the fourth century there was in Hyllarima a particular sanctuary consecrated to all the gods, and supplied with priests, which did not exclude the existence of other temples. Some time in that century the cult was abandoned, and, two centuries later, this stone was reused for a list of priest-hoods purchased for life, by one Leon, son of Theodoros. This list is reduced to its essential details—date, name of purchaser, duration of office, price paid,

names of gods to be served, advantages gained by purchaser, and responsibilities of his office. The list contains only gods of secondary importance, and includes all priest-hoods not already sold by the city. The inscription tells us nothing not already known concerning the sale of priest-hoods, a practice obtaining in Asia Minor as early as the fifth century B.C. Three divinities—Zeus Thaloinos, Ge Kanēbos, and Zeus Ondoureus—are here mentioned for the first time. The first would be a god of vegetation and the vine, similar to Dionysos, but with attributes of the Carian Zeus; the second a Carian earth-goddess, and the third a local Carian god, assimilated with Zeus. The other divinities on the list are all Greek, including the cult of the Demos of the Rhodians, and ending with a funerary cult, in which the *δαίμονες* of two persons deceased has been assimilated with the worship of local gods. This cult of the Demos was common in Athens (*Δῆμος καὶ Χάριτες*) and in Delos, and popular in Hellenistic times. The interpretation of the word *δαίμων* is next discussed. There are several distinct meanings—one, the soul of a deceased person, another, usually called *Ἀγαθὸς Δαίμων*, being a masculine equivalent of *Ἀγαθὴ Τύχη*, protector of houses and cities, and frequently worshipped in many places. Again, *δαίμων* can be equivalent to *ἥρω*, and the *δαίμονες* of individuals may be local heroes, protectors of a city. It is in this latter sense that the word is used here. In Roman times it becomes the equivalent of *Dii Manes*. The cult of the *δαίμονες* is particularly common in Caria. Here, however, it antedates the Roman period, and so they are not assimilated with Roman deities. As the names of the individuals who are thus worshipped are identical with names occurring on the fourth century inscription, it may be assumed that they were either members of a most distinguished family or that they themselves had rendered conspicuous services which caused them to be elevated to the rank of local heroes. It is noteworthy that all of the divinities listed in this inscription are of a rural and apotropaic type.

The inscription furthermore gives valuable testimony as to the Rhodian occupation of Caria. The name of the high priest, Agloubrotos, is exclusively Rhodian, as well as the cult of the Demos of the Rhodians, and the whole text suggests a reorganization of local cults by Rhodes, such as is known to have been done in other places controlled by them and gives a very clear commentary on a passage in Polybius (XXIII, 3, 8) where

mention is made of such a reorganization in 189 B.C. For this inscription a date of 188 is suggested.

A discussion follows of the inscription C on the right side of the stone. A commentary on the text follows the transliteration. It consists of deeds regarding the lease of certain lands, three of such documents being here inscribed. These lands in some cases were the property of the temple of Apollo and Artemis, consequently the deeds were inscribed on this stone, the character of which was already religious. A date at the end of the third century B.C. is suggested—they certainly antedate the document on the sale of priesthoods.

The remaining inscriptions (nos. 40-44) are of little importance.

Inscriptions from Caria.—Commenting, in what he calls a "Preliminary Note," on the article of Laumonier published in the same number, LOUIS ROBERT, in *B.C.H.* lviii, 1934, pp. 512-517, takes issue with him in the interpretation and "indispensable correction," to use his own words, of certain of the inscriptions, some of which he calls "old acquaintances." He signals Laumonier's nos. 5, 6, 7, 8, 12, 13, 14, 17, 24, 39, and 44 for further emendation, commentary, and corrections.

A Metrical Inscription Found in the Shrine of the Dioscuri at Delos.—This shrine was originally discovered by Fougères in 1886, but not entirely unearthed at that time. In 1923 it was re-examined by Laumonier, but still not completely laid bare, and no evidence was discovered to assign a divinity to it. In 1933 it was decided to excavate it thoroughly, and the work was entrusted to FERNAND ROBERT, who, in *B.C.H.* lviii, 1934, pp. 184-202, briefly describes the work done, and refers to articles by himself and others for its architectural features. The sanctuary is identified as that of the Dioscuri, protectors of ships and sailors, by an inscription found on July 11, 1933. In publishing the inscription, a map is given of that section of the island where the sanctuary is situated, to show its location, and a plan of the enclosure, which is mostly of the Hellenistic period, although traces of an earlier archaic temple have been found. The inscription is in elegiac couplets, and a photograph, transliteration, and translation are given, showing that a certain Athenobios was responsible for the revival of the cult of the Dioscuri and the rebuilding of their temple, and became their priest. A commentary follows, showing that the principal interest of the text is to identify this as the sanctuary of these gods, to which frequent reference is made in other

inscriptions, and which had been hitherto considered as being housed in the shrine of the Cabiri, or the Samothrakion. The quarter of the Dioscurion, as now constituted, was in the maritime district of the city. The shrine is further identified by the discovery of two heads representing these gods—one found by Laumonier, one by the present writer—and by the presence of female statuettes, undoubtedly of their sister Helen. It is not merely the Hellenistic, but the archaic sanctuary that has been discovered. This also gives valuable evidence for a further study of the topography of the city, and confirms certain attributions of sites already made.

The inscription points to the fact that the archaic temple had been long abandoned, when the Hellenistic one was built in a different part of the enclosure; that there was an annual celebration in honor of these gods; and that the priesthood was assigned by lot. Also we can see from the use of the word *xoana*, that there were cult statues in the temple, fragments of which have actually been found. One was of the archaic Kouros type, reset on a Hellenistic plinth, and over life size; the other was Hellenistic, and even larger, of a standing nude male figure. We know that mounted statues of the Dioscuri were set up in the Samothrakion, which points to two shrines of these gods in Delos, one in their own proper home, the other in a Cabiric sanctuary existing either simultaneously or successively, but probably recruiting their worshippers from different races.

The archaic shrine of the Dioscuri is proved by the inscription to have been allowed to fall into ruins long before the revival by Athenobios. Associated with the archaic foundations were found sherds of Corinthian, Rhodian, Naucratic, Attic black-figured, and other contemporary wares, only two red-figured sherds being included. No sherds were found between these and third and second century relief vases; nor are there any foundations of any building of the Classical period. Another inscription, long known, dates the beginning of the new construction in 301 B.C. The second destruction of this sanctuary, which is proven to have been by violence, took place some time between 88 and 67 B.C., and was subsequent to Athenobios, but the inscription here published must be, from the letter-forms, not earlier than 166, and is considered by Roussel to belong in the first century B.C., which points to still another abandonment of the shrine in Hellenistic times.

During the whole period of Delian independence there is frequent inscriptional mention of the Dioscurion, dating between 301 and 169, but subsequent to Athenian sovereignty in 166 there is no mention of the sanctuary, but of the Samothrakion or Cabirion. This points to the abandonment of the sanctuary from 166 to the restoration by Athenobios. It is significant that the two abandonments coincide with the periods of Athenian domination. This hostility of the Athenians was not based on religious grounds, as the Dioscuri were worshipped in Athens, nor because the cult was probably originally brought to Delos from Thera, whose inhabitants were of Dorian stock; it was because, in their capacity as protectors of navigation, they were the original tutelary divinities of an independent Delian commercial centre, and their worship kept alive a political spirit hostile to Athenian domination. The history of the temple of Apollo shows that this cult was glorified to show the power of the new rulers. It was reduced in rank to a simple *oikos*, when Delos resumed her independence. Therefore the abandonment of the Dioscurion was decreed to humiliate the Delians, who in their turn, on winning their independence once again, resumed their worship of these gods. The Athenians had never actually suppressed the cult, but merged it with that of the Cabiri; the Delians maintained the worship of the Cabiri, but rebuilt the old Dioscurion. But in 166 the Athenians returned and the Dioscuri were then once more relegated to the Cabirion. Athenobios restored the sanctuary in his capacity as 'Ιερεὺς Θεῶν Μεγάλων Διοσκούρων Καβείρων, and he could do this, because in 166 the Delians had been banished from the island by Athens, and there was no danger of political upheaval.

Inscriptions from Philippi.—In *B.C.H.* lviii, 1934, pp. 448–483 (13 figs.; pls. vii, viii) P. LEMERLE publishes thirty-seven inscriptions found in the campaigns of 1932, 1933, and 1934, among the foundations of the Byzantine basilica at Philippi. Although the title of the article reads "Greek and Latin Inscriptions," only Latin are published here; the Greek will be published later. These inscriptions were not found *in situ*, but were employed as building materials for the basilica or for tombs under its floor. The first inscription is of Tiberius, and is dated in the year 37; later an inscription of Vespasian was added to the same stone, which is dated in 78–79. A dedication to Hadrian, dated between 119 and 131, is next published. The third is a stele, set up by two

aediles of Philippi, at their own expense. These aediles were custodians of weights and measures, and the stele was surmounted by objects connected with these functions. The cost was probably borne out of the sale, as old metal, of false weights confiscated by them. Two dedicatory inscriptions, one to Mercury and one "Fortunae et Genio Macelli," are next commented on. No. 6, a funerary inscription, has on its reverse side a relief of Nemesis and the Thracian horseman. No. 7 is of a freedman, who was a Dendrophorus Augustalis—an account of this office is given. No. 8 gives the office of Choragiarius, which was a property and wardrobe master for the theatre. The remainder are funerary, and of interest only as adding to the known names of persons residing at Philippi. A prosopographical index concludes the paper.

Inscriptions from Thasos.—In continuation of his previous articles (*B.C.H.* lvii, 1933, pp. 394–415; lviii, 1934, pp. 173–183) MARCEL LAUNEY, *ibid.*, lviii, 1934, pp. 484–500 (3 figs.) publishes a series of inscriptions found on this site. Seven are here published, of which the first is a new dedication to Herakles, found in 1934, confirming the site of the Herakleion proposed in his preceding article. It is a small statue-base; part of the statue still exists, probably of the god drawing his bow. It dates in the period between the first century B.C. and the first century A.D., and is after the Roman conquest, as is proven by the Hellenizing of Latin words. Α ἄραξ λεγόμενον appears: ἑρκιῶλον, probably the Latin word *urceolus*, in itself rare. The dedication is to Herakles Kallinikos, an epithet of relatively frequent occurrence, the most famous instance being in the hymn of Archilochus, showing that this Herakles is the same god worshipped at Paros. Herodotus in his time (II, 44, 5) saw Oriental influence in the cult of Herakles at Thasos, and connected him with the Tyrian god Melkart. The next five inscriptions are of no great significance. Three of them (nos. 4–6) belong between the third and first centuries B.C.; no. 3 belongs in the second century A.D.; and no. 2 in the fourth century A.D. This is a votive plaque, consecrated in memory of a sacrifice and sacred feast. The seventh inscription has been previously published; first in *Rec. Arch.*, 1873, p. 40 f., and finally in *I.G.* xii, 8, 528. Launey shows that the readings given previously are erroneous, and to prove his point gives other inscriptions where the same city of origin is given—that of Septimianus Canotha in Arabia or Syria.

Note on an Inscription from Thespieae.—This inscription, first published by G. Colin, in *B.C.H.* xxi, 1897, p. 553, no. 2, is made the subject of further study by MICHEL FEYEL, in *ibid.*, lviii, 1934, pp. 501–505. This inscription is now in the Thebes Museum, no. 9029. It deals with the public rentals. The reading of Colin of the word defining the lots to be rented is $\pi\acute{\upsilon}\alpha\varsigma$, explained as a Boeotian form of a non-existent word $\pi\omicron\iota\alpha\varsigma$; and this has been accepted by subsequent commentators, and has found its way into the *Lexikon* of Van Herwerden and the new Liddell and Scott. A new examination of the stone has convinced the writer that the reading should be $\gamma\acute{\upsilon}\alpha\varsigma$. This word occurs as $\gamma\acute{\upsilon}\eta\varsigma$ in the papyri, and there means "a parcel of land enclosed by dikes" and finally by assimilation is used for a dike itself. It is also found in use by the tragic poets, where it means "a field" but does not occur in classic prose literature. In this place it obviously means a parcel of land enclosed by walls or by a mound of earth. This inscription dates in the third century B.C.

Chronology of Athenian Coins with Names of Magistrates.—In *B.C.H.* lviii, 1934, pp. 101–137, MICHEL L. KAMBANIS calls attention to the discovery, in 1929, of a large hoard of Athenian tetradrachms, bearing names of magistrates. This hoard began to be known in February, 1931, and was found at Halmyros, by two peasants, who noticed two vases, one of bronze and one of terracotta, in the bed of a dried-up brook. In the bronze vase were ornaments and ingots of gold, and in the terracotta nine hundred and sixty-nine Athenian tetradrachms. The jewelry was sold in Europe, but is now back in Greece, in the private collection of an Athenian lady, and the coins are also in Greece, and can all be accounted for. Seven hundred and thirty of these coins are then tabulated and described. Certain ones are in the author's own collection. A retabulation follows, based on the state of preservation of the coins. From this criterion, the writer believes that those bearing the names of the magistrates Xenocles and Harmoxenos (of which there are fourteen) are the latest of all, and belong in the very year in which the hoard was buried.

The second section of the article discusses these magistrates. It was well known already that they had three years of service, distinguished on the coins by different symbols. Head and Sundwall have placed these coins in the period 91–89 B.C., a date rejected by Kambanis, on grounds which

will appear later. He believes that these men held office for three consecutive years, with no interval in between. This hoard of coins contains examples of only the first year of their tenure of office, and of that only to the eighth month. In comparison with some of the other magistrates, this series is meagerly represented. The coins of the later years had not yet been issued, and the later coins of the first year had not begun to penetrate Greece, if, indeed, they were issued at all. This is the reason why Kambanis considers these coins the latest in the hoard. Immediately preceding Xenocles and Harmoxenos he would place the coins with the names of Demeas and Hermocles.

The third part of the paper deals with the connection of these two series of coins. With the names of Demeas and Hermocles a third magistrate is associated, whose name varies with different issues, while in the case of Xenocles and Harmoxenos no third name appears, nor does one appear for thirty-five series of subsequent coins. As none of these series are included in the hoard, it would follow that Xenocles-Harmoxenos is the earliest of the two-name series; this is also confirmed by the rich numismatic finds at Delos. The hoard is not an unbroken series; between the earliest which bears the names Glau-, Eche-, and Xenocles-Harmoxenos, there are at least six hundred magistracies unrepresented.

The fourth part of the article deals with coins bearing the names of Demeas and Kallikratides, unrepresented in the hoard, dated by Head at a little before 100 B.C. This date Kambanis disputes, as it would thus be earlier than Xenocles-Harmoxenos, which he believes impossible, as no third magistrate is associated with Demeas and Kallikratides. There is a palimpsest coin in Berlin, a Macedonian coin struck in 93/2 B.C. over a coin of these magistrates, which shows that coins of this type were in circulation at that time or earlier. If Head is right about Demeas and Kallikratides, he is in error on Xenocles and Harmoxenos, who must therefore be anterior to 100 B.C. Kambanis would date Demeas and Hermocles in 110, and Xenocles and Harmoxenos at 109–07.

The fifth section of the paper takes up the coins of Niketes and Dionysios, and those of Aristion and Philon, both represented in the hoard. Numismatists have agreed that it was during the latter of these two magistracies that Mithradates and his Asiatics arrived in Greece. They therefore date them in 88/7 B.C., while they put Niketes and Dionysios at about 125 B.C.

Kambanis rejects this, and places Aristion and Philon immediately after Niketes and Dionysios, on stylistic grounds, showing that the same obverse was used on coins of both series. As each of these series have names of a third magistrate, they must antedate Demeas and Hermocles. Kambanis then suggests that we are dealing with two issues of Aristion—one of about 124, and another of 88/7, the one with Philon being the earlier.

The sixth part of the article speaks of the hoard of one thousand Athenian tetradrachms, found in 1898 in Zarova in Macedonia, which was dispersed in Vienna, Constantinople and Athens, where two hundred and twenty-eight pieces were brought for sale and there published. The dating for the new hoard here suggested is confirmed by the evidence of this one, and Kambanis refers to his article in *B.C.H.* lvi, 1932, pp. 37-59, for his classification of the coins of the magistracies between Charinautes-Aristeas and Aristion-Philon. In the Macedonian hoard, thirty-one of the forty-five series with three names are included, leaving fourteen lacunae. Nine of these magistracies, all represented in the new hoard, must antedate Charinautes-Aristeas; the five others must be posterior to Aristion-Philon, of which three are included in the new hoard. Kambanis, on grounds of style, places Aristion-Philon exactly four years earlier than Demeas-Hermocles.

In the last section of the article Kambanis takes issue with the late Theodore Reinach regarding the dating and classification of these coins.

ROMAN

Trophies from the Palace of Domitian.—In *Mélanges*, Fasc. I-VI, 1935, pp. 77-80, MARCEL DURRY studies two trophies from the palace of Domitian, which are to be found in the National Museum of Naples. The first supports a funeral slab of red limestone and contains a scene of combat accompanied by the inscription *C.I.L. IX, 3878*. It is fractured in the upper right section. The lower part is decorated with the same border as the fragments in Rome. The projecting face, to the right, bears the lower part of the long tunic of a Victory; to the left, a heap of arms is visible in which can be distinguished a quiver, helmet, *carnyx*, *bipennis*, *dolabra*, *pelta* and both oval and hexagonal *scuta*. The second fragment consists of two stones joined by a modern iron hook. The left end seems not to have been sculptured but rather to have been joined to the structure of the building in which it was set up. The trophy has suffered

considerable damage on the left side, and is difficult to examine inasmuch as it is so flush with a base next to it. It is possible to distinguish only a *bipennis* and four shields the borders of which are adorned with holes. Of the Victory only the bottom of the tunic can be seen. The right hand of the Victory apparently rested on the trophy.

A Bust of Domitia Lucilla.—*Ibid.*, pp. 81-94, LOUIS LESCHI presents a study of a bust which was unearthed in March, 1933, at Arnaud à Cherchel, by workers who were digging trenches for a canal. The bust is that of a woman and is in a fine state of preservation. The nose alone is slightly mutilated. The woman represented was still quite young and possessed fine and regular features. She is dressed in a tunic buttoned on each shoulder, over which is draped a *pallium*. Leschi describes in detail the type of coiffure represented on the bust, and its significance. By means of comparison with known busts in Copenhagen, Hanover, Madrid and Florence, the effigy seems to be that of Domitia Lucilla, mother of Marcus Aurelius. Leschi sees confirmation of this supposition in an effigy on a coin of Nicaea.

Mosaics at Cherchel.—*Ibid.*, pp. 113-142, JEAN BÉRARD describes the mosaics of Cherchel which have been hitherto unedited. The most interesting one presents scenes of agricultural labors, and is divided into four sections, the two upper ones of which are in a good state of preservation. The first represents a man leaning on a plough the handle of which he grasps with his left hand, while in the right hand he holds a whip and the reins. There is a second man who is about to strike two bulls with a stick. The second panel represents a similar scene and is adorned with a border similar to that of the first. In this scene a field of olive trees is depicted. The third and fourth sections of the mosaic have as their subject the work in the vineyards. The first of the two shows a vine-trellis near which three men are working. The subject of the last is similar, but here the trellis is lacking and only two laborers are visible. The mosaic was contiguous to another which depicts the gathering of the grapes, and of which a considerable fragment remains. A trellis, vines, a ladder and the lower half of a man mounting the ladder are preserved. The last two fragments of the pavement described by Bérard depict a retinue of Amphitrite. The larger fragment shows the daughter of Nereus on the back of a sea monster. The goddess is nude, half stretched out on a piece of drapery with her right leg bent under

her. An *amorino* is seen at the left and above the whole is a fragment of an inscription which Bérard discusses. The second fragment shows the sea, on which is a boat bearing a small dancing boy above whose head in the background is seen the prow of a second vessel. Bérard treats in full the probable arrangement of the fragments, the artistic technique which they reveal, and the information which the agricultural scene affords us in regard to the nature of the Roman plough.

A Sarcophagus in Algiers.—*Ibid.*, pp. 143–184. JACQUES AYNARD describes a sarcophagus of the museum of Algiers, which is decorated with scenes representing the legend of Bellerophon. The fragments of the sarcophagus were found in the ruins of a cellar near Port-Gueydon, a region rich in archaeological finds. Aynard first gives a résumé of the legend of Bellerophon as it is commonly conceived through literary and archaeological sources, and then describes the treatment which it received at the hands of the sculptor of the sarcophagus. The panels contain the legend in all its parts, Bellerophon's departure from the court of Proetus, the capture of Pegasus, the triumph over the Chimaera. Aynard gives much attention to the identification of the figures represented in the various scenes, and draws comparisons with other extant treatments of the legend. The symbolism involved in the details of the legend as expressed in such artistic figures as the spring at which Pegasus drinks, the small cupid bearing the torch and the like, is discussed in full.

Cylindrical Tombs.—The Berlin Museum contains fifteen pieces of Luna marble found at Falerii. They come from the top of the tomb of one Cartinia and comprise parts of the architrave, frieze with acanthus scroll, cornice, and crown consisting of altars with candelabra in relief and connecting pieces with garlands. The diameter was ca. 10.4 metres. The ruins of the tomb itself are identified by its dimensions and by fragments of a marble facing. The style of the ornament dates it 60–70 A.D. The crown of the tomb is imitated not from crenellations of fortified towers but from free-standing altars which were placed in considerable number on some cylindrical tombs. Such altars appear on several tombs depicted in relief. One, represented on the Trajan column, has been found at Grădiştea in Rumania. No human remains were found in it; it was a cenotaph and tropaeum. In ceremonies in honor of heroes several

altars were used; one example is the sacrifice with six altars on the Trajan column. Most of the cylindrical tombs belong to the first century A.D. (B. GÖTZE, *Arch. Anz.* L, 1935, pp. 334–354.)

CHRISTIAN, MEDIAEVAL, AND BYZANTINE

Catacomb of St. Janvier of Naples.—The catacomb of St. Janvier of Naples is of special interest, since it has a collection of frescoes extending from the second century through the tenth. Although the catacombs of Rome were abandoned, as places of burial from the fourth century onwards, those of Naples continued to serve that purpose. The art of the catacomb of St. Janvier has been divided into four parts. In the first period (second and third centuries) are found the beginnings of Christian art. The second period (fourth century) had borrowed from the catacombs of Rome and shows pictures of the Good Shepherd and Jonah. In the third period (from the fifth century to the beginning of the quarrel over images) the departed are depicted as praying. The fourth period extends from 763 and includes the tenth century; now the artists represent by preference Christ, saints, and angels. (From a review of H. ACHELIS, *Die Katakomben von Neapel*, Leipzig, 1935, in the *Nouvelle Revue Théologique*, March, 1936.)

Mediaeval Litanies.—The current issue of the *Analecta Bollandiana* (Tom. LIV, fasc. 1, 2 (1936)) contains little of direct interest to archaeologists. Of great value, however, are Father Coen's article on three mediaeval litanies of the saints, the texts of two Greek lives of St. Maxime le Kausokalybe, of Mt. Athos, edited by Fathers Kourilas and Halkin, and remarks by Father Grosjean about some Celtic-Latin usages in a paper, "*A propos du manuscrit 49 de la reine Christine*."

Agia Sophia.—Investigations in the area in front of Agia Sophia disclosed the original height of the atrium of Justinian, and the fact that stone as well as brick is used on the outside of the building. The positions of the west wall and portico of the church before Justinian were determined, and fragments showing all details of the portico were found. It had a propylon with four columns; the entablature is carried around the arch over the central intercolumniation; it belongs to the time of Theodosios II (404–415). (*Arch. Anz.* L, 1935, pp. 305–311.)

NEWS ITEMS FROM ATHENS

Crete still continues to produce new archaeological material from almost every region of the island. Between May 4 and May 19, 1936, Mr. and Mrs. Pendlebury and Miss Money-Coutts carried out excavations at the cave of Trapeza for the British School:

"The cave of Trapeza lies above the village of Tzermiadha in Lasithi, immediately opposite the Diktaean Cave at Psykro. It was first discovered by Sir Arthur Evans in 1896, since when practically the whole of the deposit of earth within has been turned over and over by the peasants in search of treasure. Thus the dating of most of the objects found rests on purely stylistic grounds. Fortunately at one or two points, virgin soil had not been reached and it was possible to date with accuracy the local style of Neolithic pottery which here makes its first appearance.

"Briefly the history of the cave is as follows: In the Neolithic period the cave was used as a dwelling place. Together with fragments of the ordinary type of Neolithic pottery was found a large number of sherds of a coarse mottled ware, some of which were decorated with human faces roughly moulded below the rim or with vertical 'tresses' applied to the body of the pot.

"From Early Minoan I the cave was used as a burial place and continued as such until Middle Minoan I (which continues in most parts of Crete down to the beginning of Middle Minoan III) when the site was deserted in favor of the cave at Psykro.

"Probably to E. M. II must be attributed a group of ivory figurines of a type which is peculiar to Lasithi. They are roughly but effectively blocked out with arms folded and their only clothing—an apron—depending in front. In conjunction with these must be taken a small ivory head with traces of inlay in the eyes, which if not an actual import from Mesopotamia was certainly made under strong Sumerian influence.

"Among the many seals, that which stands out as the finest—perhaps the finest in all Crete—is in the form of a monkey, exquisitely carved in ivory. Interesting also is the good example of an early XIIIth Dynasty scarab.

"A number of bronze daggers and toilet knives were found, one of the latter still retaining its ivory handle.

"The bulk of the pottery is still in the hands of the mender, but it is already possible to say that a good representative collection of Early Minoan pottery of all three periods has been recovered. Particularly noteworthy are the local copies of 'Vasiliki' wares in which the mottling due in the originals to uneven firing is here imitated in paint.

"The vases of stone also provide a good series. Many have exact parallels from other sites, particularly Mokhlos and the Messara; but one or two are not only made of local stone but are also of shapes which seem to be peculiar to the district."¹

At Annisos the excavations continued in 1935 brought to light four new inscriptions (from the upper Roman layer of the Sanctuary), dating from the second to the first century B.C. One is mutilated, the other three contain the names of the kosmoi. These obviously have to do with work in the Sanctuary or with votive offerings. Lasthenes, the son of Sosamenes, named once as *kosmos* is perhaps the general who, with Panares, destroyed the first Roman fleet which made an expedition against Crete and resisted, for a long time, the second invasion under Metellus, 69-67 B.C. Since he finally retreated to Knossos and there burned all that he could to prevent its falling into the hands of Metellus, this city must presumably have been his home. The perfection of the small finds and the votive offerings of this period is remarkable and indicates the flourishing state of the coast towns. This may be due to the piratical activity of the Cretans who placed their harbors at the disposal of their allies, the Cilician pirates. It was this alliance that brought about the intervention of Rome and the inhuman severity of Metellus in spite of the heroic resistance of Lasthenes and Panares.

Among other Cretan chance finds of the year, two extraordinarily well-preserved clay idols of the Mother Goddess take first rank (Figs. 1-2). The idols were found at Gazi between Tyliisos and Herakleion, 6 km. west of the latter, by peasants who unfortunately destroyed the remains of the building in which they lay. According to their descriptions and the meagre results of a small trial

¹For this report I am indebted to the excavator, Mr. Pendlebury.

excavation, the structure was a small circular stone hut with an entrance on the north. Now we can understand the meaning of small clay votives in the form of a hut, from Phaistos and from the Sub-Minoan "wellhouse" at Knossos. In the lat-

of Sir Arthur Evans that the objects are derived from clay water-pipes. The importance of the discovery lies chiefly in the fact that together with that from Pankalochori, it proves the existence in the latest Minoan phase, of small country sanc-



FIG. 1.—TERRACOTTA IDOL FOUND NEAR TYLISSOS
(Courtesy of M. Marinatos)



FIG. 2.—TERRACOTTA IDOL NEAR TYLISSOS
(Courtesy of M. Marinatos)

ter the goddess is represented with hands upraised. Our two idols are also shown in the well-known attitude of adoration. The smaller, 0.53 m. high, bears traces of red paint and has on her head a pair of doves and the so-called "horns of consecration." The face is round. On the larger goddess, ht. 0.80 m. (Fig. 2), only the narrow red spiral band on the cylindrical lower part of the body is painted. She wears in her hair three pins with representations of pomegranates, and has remarkably Greek features (Fig. 3). Apart from the idols the Sanctuary at Gazi produced only a small plate and one of the well-known tubular cult implements which grow narrower toward the top and which admirably confirm the explanation

of Sir Arthur Evans that the objects are derived from clay water-pipes. The importance of the discovery lies chiefly in the fact that together with that from Pankalochori, it proves the existence in the latest Minoan phase, of small country sanctuaries and it refutes the prevailing view that there were no public Minoan cult places except caves and open-air precincts. Such small sanctuaries with clay images of the gods must have survived in some remote places down to the Greek period.

Geometric graves have come to light at several places, one in the refugee suburb of Nea Halkarnassos, at Herakleion, another at the mouth of the Kairatos, with numerous developed Geometric vessels and at Bromónero, near Arkhanes, a pair of pits with about forty Protogeometric and Geometric vases, and near the village of Hagies Paraskives, a rock-cut grave excavated by M. Platon, which was similar to those at Knossos and

contained more than seventy pots, ranging from Protogeometric to Orientalizing. A small lid pot with relief decoration evidently imitates a prototype in faience.

A walled Roman tomb at Kavousi on Mirabello



FIG. 3.—DETAIL OF TERRACOTTA STATUETTE SEEN IN FIG. 2.
(Courtesy of M. Marinatos)

Bay contained some unpainted vases and more than thirty lamps, many with obscene representations, as well as two bronze coins, important for dating, of Maximianus (235-238 A.D.) and of Probus (276-282).

The earthquake-proof reconstruction of the museum at Herakleion is proceeding methodically. The first wing will be ready this year. During the excavations for the foundations Roman tile graves came to light at a depth of 10 m. as well as a mass of Venetian ruins and numerous marble architectural pieces and fragments of sculpture. More than fifteen marble capitals of late antiquity were produced in the course of a reconstruction of the Church of St. Titus.

Reports from the Dodecanese Islands, for the years 1934-35, are now available. The most important discoveries on Rhodes concern Ialysos and particularly the region called Marmaro, where Maiuri and Jacopi had already excavated suc-

cessfully in earlier years. The graves opened in 1934 belong approximately to the middle of the sixth century B.C. In a total of eighty-three graves, there were only four red-figured Attic vases, among them a psykter of the late severe style with Dionysiac representations, which belongs to the circle of Hermonax. Only seven cases of burning came to light; evidently about the middle of the sixth century, cremation, which had been customary in the Geometric Period, was no longer in use. As is well known, in cremation burials in Rhodes, the ordinary cinerary urns were not used, but a pyre was lighted in a pit and the human ashes were buried together with the remains of the pyre. Now, however, at Marmaro, three cinerary urns have come to light. They are vessels with geometric decoration, dating from the eighth century. They contained saucers, iron weapons, pins and fibulae of bronze. These three graves thus stand apart from the rest of the necropolis which belongs to the middle and the second half of the sixth century. The inhumation graves are nearly all of the usual type of stone cists with a gable-shaped lid, of good workmanship, but there are also some marble sarcophagi which were placed in a cist of local limestone. It is a peculiar fact, in this cemetery, that in nearly every instance the vases stood outside the grave at its upper end.

The accompanying objects resemble those found in previous years: vessels for liquids, drinking vessels, lekythoi and alabaster, toilet articles consisting of mirrors, scrapers, and a pair of iron handles. Among the ornaments are rings with simple bezels or set with a scarab, diadems and necklaces of gold, rosettes, some with hammered decoration, others in filigree work and with inlaid enamel, intended probably for beads or hairpins rather than for earrings. Among the amulets appear scarabs and plaques with incised Egyptian symbols, small male figurines of clay and a seated goddess, as well as separate heads of the same type, perhaps representing the Athena of Lindos, who, as is well known, is represented not armed, but as the great Aegean Earth goddess. Two graves are especially instructive. In one was found a Laconian hydria, probably the most beautiful hitherto known. It shows two warriors fighting, and dancing satyrs of the Peloponnesian type. Also a cup with knobbed handles, two decorated cups of the first and second types of Siana, a small cup with a drinking refrain, an Attic-Corinthian amphora with Amazons and two small East Greek, perhaps Samian, vessels were found. Of the

three archaic cups, the third belongs probably to the group of the Heidelberg Cup, perhaps a youthful work of Amasis. Equally valuable also are the contents of the second grave. It contained a Rhodian fruit dish, a Fikellura situla with partridges, a mirror, a ring with a representation of a winged boar, two beaten gold rosettes with battles of the cranes and three Attic vases. Of these latter, a hydria with a departure of a warrior, belongs to the circle of Lydos. A cup with knobbed handles, with a battle of Amazons and a procession of mounted Amazons, is worthy of Amasis and a skyphos represents, in caricature, Dionysos, Ariadne and satyrs. The necropolis of Marmaro has produced a great many black-figured vases, among them a beautiful hydria which can be attributed to the period immediately before Exekias, and also two important beaten silver cups, of excellent workmanship, which correspond exactly to one found in the Caucasus. In the district of Daphni, where in all probability the incineration necropolis of the Early Archaic period should be placed, were found Rhodian jugs of the Kamares type, while Annuechio, the continuation of Marmaro, yielded objects of the second half of the sixth century. Interesting is the association of a sarcophagus of Clazomenian style with an Attic lekythos of about 480 B.C. The sarcophagus, in its decoration, resembles others found in Rhodes. One may perhaps recognize in this a local survival of the style. The extensive necropolis of Ialysos has also produced among many others, a cup of Tleson, with the representation of a panther.

A trial excavation on the shore nearby has brought to light the first remains discovered here of houses of the Mycenaean period. The walls, built of irregular stones, laid on massive foundations, were found in 1935, in three widely separated trial trenches. In 1936, excavations were carried out on a larger scale and the first Rhodian Mycenaean settlement was uncovered. Two layers could be clearly distinguished. Both are, however, late Mycenaean, and there are no traces of a break in development. Probably the earlier settlement was destroyed by an earthquake. It has not yet been excavated. The upper settlement yielded among other things numerous remains of frescoes with representations of plants, large clay jars still in place, some weapons, and a mould for making dagger blades.

In the region of the city of Kamiros the extensive excavations of G. Jacopi were vigorously

continued. The lower sanctuary was found to consist of a precinct with altars dedicated to various divinities, including some local ones, a Doric temple *in antis* and an open space on the north side of the temple. This area was bounded on its other sides by a stepped terrace wall along which ran a street with private houses, by a room, probably the hierothyteion mentioned in inscriptions, and by a stuccoed façade which bore half columns, and two pilasters on either side of the stairway. In this area were statues and honorary inscriptions. The temple is Hellenistic, but it is earlier than the contiguous statue bases which are dated to the second century B.C. by a dedication of the Stoic philosopher Panaitios. The buildings on the three other sides of the plaza belong to this period. The private houses show signs of remodeling in Roman times, but the town planning is Hellenistic, like that of Delos and Pergamon. The newly recovered inscriptions are, for the most part, lists of priests and hieropes. Among the sculpture there deserves mention an Artemis torso of the Laphria type, a herm of Hermes wearing a mantle, a small herm of Pan, with a mantle, of beautiful chalcedony, a statuette of Zeus (ht. 0.70 m.), a copy of a bronze work that may have been made by a Rhodian artist of the second century B.C. under the influence of the type created by Bryaxis.

The excavation of the Hellenistic aqueduct of Kamiros was also important. This has been examined for a distance of 1300 m., and for almost the whole of its length it is carefully built, to the height of a man, of small squared blocks. In the first period of its existence—third to second century B.C.—the water must have flowed abundantly so that no water pipes were required. In Roman times, however, they were necessary. These pipes are 14 cm. in diameter, with air holes. In the branch channels, pipes are also used but with a diameter of only 5 cm. The connections were made by peculiar settling basins of terracotta. At the conclusion of the excavation, the water-channel was again put into operation with the use of the ancient pipes.

In the city of Rhodes the excavation of the Hellenistic Grotto of the Nymphs on Mt. San Stefano was continued, bringing to light two new grottoes with niches. Likewise digging was continued in the subterranean cemetery of Akandia and a series of rock-hewn chambers was cleared, including a hypogeum, the ceiling of which was partly vaulted, partly flat. In addition to small

objects, some funerary inscriptions and a handsome male torso of the late Hellenistic period were recovered. The earliest necropolis of the city of Rhodes, on Kysil Tepe, yielded a large marble grave stele of Attic style of the middle of the fourth century. The inscription, in the Doric dialect, with many Ionic forms, gives the names of the dead Kalliarista, daughter of Phileratos, and her husband, Damokles, who erected the monument.

Another piece of the ancient city wall, with its characteristic bosses, has been discovered. Upon these walls was built the mediaeval fortress of Mandriacchio. In the course of fortifying the harbor an immense number of spherical projectiles was found, probably dating from the time of the siege conducted by Demetrios Poliorketes. They bear, inscribed in clean cut letters, twenty different indications of weight, ranging, according to the Attic system, from five minae to twenty talents. The largest missiles, in particular, support the ancient accounts of the use of gigantic siege-guns for the capture of the city.

On the island of Kos the excavations in the region of the city were continued on a large scale by Moriconi. Through a wise governmental measure the entire region of the extensive city of the Knights which formed the heart of the Graeco-Roman city, was reserved for excavations. These have laid bare great complexes of Roman and Hellenistic buildings which can be divided into three groups. The first includes the sanctuaries in the harbor quarter where three temples were excavated. Two of them are exactly alike in dimensions and were surrounded, at least on the south and east sides, by colonnades. Propylaea led into the sacred precinct. A considerable part of the superstructure of the eastern wing is preserved; of the western wing merely the foundations have survived, as the rest was destroyed by the Knights in the fifteenth century. The third temple which was found beneath the chapel of H. Demetrios appears also to have been surrounded by a precinct. Some fine architectural pieces from this temple and from the east colonnade, of late Hellenistic date, are preserved. These sanctuaries can be identified as those of Aphrodite Pandemos, Pontia and Herakles, which, according to inscriptions, stood in this quarter between the harbor and the Agora. Trial excavations below the south colonnade have brought to light long stretches of the city wall built of large rectangular blocks. This wall dates from the time of the founding of

the city, about 366 B.C. It had already in part been destroyed in Hellenistic times. It may be followed westward for about 200 m. On it stands, well preserved, the northern wing of the Hellenistic Agora.

The second group of buildings excavated comprised the Agora, of which the northeast corner and parts of the north and east sides have been laid bare. The east side held a Doric colonnade, the architectural members of which have been to a great extent recovered (two columns and their entablature have been re-erected). Behind the colonnade lay large halls. The north side, which, as we have seen, stands on the fortification wall of the fourth century, was remodelled in imperial times to form a decorative entrance enclosing mighty Corinthian columns and a flight of steps. The limits of this large market-place have not yet been determined. In Hellenistic times it was paved with large, regular, marble slabs which the Romans replaced with smaller slabs. Excavations beneath the Hellenistic colonnade have revealed the stylobate of an earlier stoa of poros on which the lowest column drums still stand in position. Up to the present time only the east and north sides of the colonnade have been exposed, the latter likewise resting on the city wall. The colonnade presumably dates from the second half or the end of the fourth century B.C., and evidently belongs to the original Agora.

The third division consists of the residential quarter. Parallel to the south colonnade of the sanctuaries, a straight street runs from east to west intersected by another equally regular, coming from the south. At the crossroad still stand ruins of Hellenistic houses. Everywhere else the houses have suffered remodelling down through late Imperial times, the reconstructions spreading into the street and even into the temple precinct, which at that period already lay partly in ruins. Up to the present only the fronts of the houses have been laid bare. They contained shops and store-rooms with gigantic clay pithoi and small marble basins. The most remarkable house had even invaded the little Hellenistic temple beneath the church of H. Demetrios and hypocausts were installed in it. The house was richly decorated and possessed mosaic floors, one of which, with a representation of Herakles dining with Admetos, is especially noteworthy. A part of the *piscina*, paved with marble tiles, is also preserved.

The excavation of the Roman *Thermae* begun in 1931 has also been continued. This great structure

stands in the district of the new gate between the Odeion and the Stadion discovered in 1929. A Roman street with admirably preserved pavement, sidewalks and drainage, leads past the south side of the *Thermae*. The resumption of the excavation has revealed the plan consisting of some rooms with hypocausts, a large apsidal hall with semi-circular niches, and a well-preserved mosaic floor. This room and some of the others, belong to a reconstruction of Christian date which raised the level of the floor considerably in certain rooms and erected a church in one of the largest halls. Other rooms of these great *Thermae* contain mosaic floors, for the most part with geometrical patterns. Other mosaics have been found in the numerous houses which are coming to light through the modern reconstruction of the city. These show designs with animals and gladiatorial combats.

Trial excavations in the Turkish quarter, *Kavaldja*, where a new artisans' quarter is now being established, have uncovered the remains of Roman private houses. Here, too, are numerous mosaic floors, chiefly of Imperial times. This Roman residential quarter spread to the low hill that was occupied by the cemetery of the Geometric Period. Among the Roman ruins, graves have been found containing human ashes in stone cists and pithoi, accompanied by Geometric pottery. Some Mycenaean sherds also came to light, and near a doorway lay a Submycenaean child's grave. Apart from the ordinary Rhodian Mycenaean ware, a local pottery appears, with peculiar shapes, perhaps due to Carian influence. In the neighborhood of the child's grave, Geometric incineration graves were found, one of which produced, outside the pit, seventy pots. These remains definitely prove the occupation of Kos by the Greeks in the early historical period. The Geometric necropolis extends from *Serail* to *H. Panteleimon*. Still earlier is the rich Late Mycenaean necropolis which was discovered in the southwestern part of Kos, some kilometers from the city. The excavations are in progress here. All the graves contain unburned remains. These are simple inhumation burials with rich accompanying objects, i.e. weapons and pottery, all belonging to the end of the Bronze Age.

The Early Christian monuments of the island of Kos have also been investigated. About 2 km. east of the city of Kos, at the modern Chapel of *S. Gabriel*, an Early Christian church which stood in the midst of a Roman Bath, has been cleared.

The plan of the church is peculiar. A three-aisled cella has been combined with a rectangular room once probably roofed with a dome. Some of the columns have been re-erected as well as two of the ciborium. Little is left of the original rich ornament. The pavement consisted of marble slabs. Some rooms contained, still almost uninjured, their mosaic floors. A basilica was also cleared near *St. Paul* about 3 km. west of Kos, near the village of *Zibari*. This was of the three-aisled type with a narthex and some side rooms.

The fifth campaign of excavations at Troy, conducted by the expedition representing the University of Cincinnati, extended from March 21 to July 10, 1936. Digging was carried on in nine different areas in and about the acropolis. On the northern side of the hill, in Squares C-D 2-3 on *Dörpfeld's* plan, the remains of a large rectangular house, dating from an early stage of the First City, were completely cleared. The foundations are well preserved and give us, for the first time, the ground plan of an important house of this early period. The floor deposit yielded a fair amount of pottery, and some miscellaneous objects of bone, stone and copper. Two infant burials were found beneath the floor and four others outside the house. In Square E6 in the center of the citadel, the examination of the complex strata of the Second City was carefully continued and many successive phases of this period could be recognized. A well-cut column-base of stone, apparently contemporary with the great *Megaron*, seems to be the first of its kind dating from Troy II. This area yielded a vast amount of pottery and many other objects, including a lion's head carved in rock crystal, and two burials. On the southern slope of the acropolis, in Square F8, a layer of Troy V was excavated, producing considerable pottery. Farther to the south the remains of a huge building of Troy VI were, in part, laid bare. Although not yet entirely exposed it seems to be the largest and most impressive structure of the Sixth City yet discovered on the hill of Troy. In the long axis of the building is a remarkable pyramidal pillar preserved to the height of three courses; and the foundations of a second similar pillar have been recognized. The floor deposit was rich in pottery. Further exploration in House VI G clarified the history of the building. It was originally constructed toward the end of Troy VI, destroyed probably by an earthquake, rebuilt and re-used in two successive stages of period VII a. A study of the deposit between this house and the

city wall revealed evidence of the earthquake. Some supplementary digging in and about House VI F threw light on several problems, connected with its construction. To the south of it part of a large house of VII a was also excavated. Digging was continued in the large open area between House VI E and the Sixth City wall. Beneath the walls and floors of the VII a houses in this area was a tremendous mass of fallen stones, some thrown down from the upper part of the city wall, others from the superstructure of House VI E. This wreckage was unquestionably caused by the destructive earthquake which seems to have brought an end to the Sixth City. A small excavation in the eastern half of House VII O brought to light a floor of VII a, beneath which were set six large pithoi. On the floor were found four complete vases,

typical of VII a. On the southwestern slope of the mound, just outside gate VI U, a clearly marked stratum of Troy VIII was examined and beneath it were uncovered the walls of a house, assignable to Troy VII. Farther southward beside the small marble podium of late Hellenistic date uncovered in 1935 an earlier structure of the same kind was brought to light, evidently built at the beginning of the Hellenistic period. Beneath it are remains of an apsidal construction, probably an altar, in association with which, in a burnt layer, were found Protocorinthian and Corinthian sherds as well as local pottery of Troy VIII. A sanctuary seems to have existed here from the Archaic period down to Roman times, but the cult has not yet been identified.

ELIZABETH PIERCE BLEGEN

NEWS ITEMS FROM ROME

Since the last installment of these notes (*A.J.A.*, XXXVIII, 1934, pp. 477-90), discoveries in both the Capital and the rest of Italy have shown no sign of abating either in number or in interest; as Mrs. Strong has said in her valuable report in *The (London) Times Literary Supplement* for April 18 and 25, 1936: "The imminence of the two-thousandth anniversary of the birth of Augustus, to be celebrated in 1937-38, naturally speeds up operations. Roman monuments are everywhere being restored, fresh sites excavated, town walls explored; the country is being searched in all directions for traces of its Roman remains. All this without detriment to the interests of prehistoric, Etruscan and Greek archaeology. The output is immense." Here there is room for only a few outstanding finds and events, with some photographs that have been generously presented by the archaeological authorities. Special thanks, for information or photographs, are due to Messrs. Bartoccini, Calza, Maiuri, Mancini, Romanelli, and Zanotti-Bianco.

As usual, the most conspicuous place in the picture is claimed by Rome. Here both specialists and the cultured public are beginning to realize, not only the attraction exercised by individual finds, but the cumulative effect produced by the mass of fresh evidence: it is now possible to envisage antiquity with somewhat different outlines and colors than appeared only a few years ago. For example, the study of Early Man in this region now rests not only on the skull that was found among the gravels of the Anio River in 1929, but on a more recent find: in the same area, on July 16, 1935, the Anio gravels yielded another skull, which, though badly mutilated, still preserved most of the features which assist in determining the characteristics of its former owner—a decided orbital arch, wide and rounded nasal orifice, high, straight face, small mastoid process. The age of the two skulls now known is estimated at 40,000 years.

In the city of Rome itself, there has been some further exploration of the sacred area at the Largo Argentina, which formed a conspicuous element in the last report; especially along its west side, where the finding of remains of a structure in well-worked large stone blocks has reminded scholars that the porticoes of Pompey

were situated not far distant; it seems, however, unjustified to suggest the famous "Curia" where Julius Caesar was assassinated, for that edifice can hardly have been placed quite so far away from Pompey's theatre; the indications on the Marble Plan, if we understand them rightly, suggest rather a colonnade and behind it exedrae, the latter facing away from the now uncovered sacred area.

The grandiose systematization of the streets and open spaces of modern Rome has now reached a point where its full effect can be appreciated. The appearance of the Capitoline and the Imperial Fora is already familiar both to visitors and to the readers of the illustrated press. At the Forum Boarium, where the unprepossessing modern structures have been removed, the qualities of the two small temples are more readily enjoyed than ever before. The new park of the Oppian will render the remains of Trajan's Baths and those of Nero's Golden House which lie beneath them more accessible than they had been. The reërecting of many of the columns that lined the north and south sides of the great terrace on which stood the temple of Venus and Rome, and the skillful ordering of various details of the platform itself, have now been completed, and the red porphyry fragments of the pavement, the columns, and a statue in the western cella of the temple carefully recomposed. That unique representation of the goddess Roma herself, the painting which for generations was in the possession of the Barberini family, has been presented to the State by its owners, and has now been installed in the Museo Nazionale Romano, in one of a series of small upper-story rooms devoted to ancient paintings, where, however, the extent and nature of the repainting to which it had been subjected is all too evident.

The most surprising individual sculpture recently added to the Museo Nazionale Romano is the already famous "Warrior of Capestrano," a revelation of the art and culture of the Central Italian uplands in the late sixth century B.C. One would like to think that it represents a Warrior God, and that, with its female consort, it watched over the burial area in which it was found. Perhaps its inscription, in a local dialect,

when it is read, will tell us what its associations were in the minds of its makers.

An almost equally remarkable find has taken place at the Basilica Aemilia on the Roman Forum, where a great extent of a marble frieze has been found, with representations of episodes from Roman history; it has been installed in a hall of the antiquarium of the Forum, and its interpretation and artistic evaluation are sure to engage the attention of scholars and critics for some time to come.

The intensive development of the Aventine as a residential quarter led to the discovery, in the summer of 1935, of a group of statuettes, reliefs, inscriptions, and other objects pertaining to the cult of Syrian Baal—Jupiter Dolichenus—and other Oriental divinities; the existence of a Dolichenum on the Aventine was already known. These have been taken to the rapidly expanding antiquarium on the Caelian, where they occupy a small room of their own—a most impressive exhibit for the student of Oriental religious influence in Rome of the late second and the third centuries of our era.

Interest in the early churches of the city was never greater than at the present time, and individual discoveries and learned treatises in this field are rapidly following one another. The most recent finds have been at the Lateran, where in the early months of 1936 the explorations beneath the Renaissance pavement of the nave were extended on a large scale. Here there are three ancient periods, one beneath the other: (1) the church as built by Constantine, (2) the Barracks of the *Equites Singulares* of Septimius Severus, and (3) a house of the first century of our era. The progress of this important undertaking will be followed with the greatest expectations.

As is well known, a special feature of the Augustan celebration, which is to begin in September 1937, is to consist of the exhibition of reproductions of Roman monuments of the provinces. Material for this purpose has been arriving from all parts of the Roman world; and a delightful incident occurred in May at the Hungarian Academy in Rome—the exhibition of the casts from ancient Pannonia, together with a rendition of ancient Gregorian chants to the accompaniment of a reconstruction of the organ which was found in the barracks of the firemen at Aquincum. The effect produced by this evocation of the melodies which were current in the days

which we associate with Saint Caecilia was most impressive.

At Ostia—the understanding of which place has been furthered by the installation of an admirable antiquarium among the ruins—the perseverance and skill of the Director, Professor Guido Calza, continue to be rewarded by fresh discoveries of exceptional character. He has turned his attention in recent months to the extra-mural area on the side of the city towards Laurentum, which had long been known for its tombs (Figs. 1 and 2); and he has now ascertained that there are two distinct levels, and periods, of burial: at about the year A.D. 150, when the ground had already been preëempted by funeral monuments, it was abandoned and the level was raised by depositing a quantity of potsherds; then, some fifty years later, the area was re-used for burial at the higher level. The presence of crematories, such as occur here, is perhaps more unusual among extant cemeteries than it was in antiquity. Some fifty inscriptions on the fronts of the monuments serve as documentation for the occupants of the tombs. The burials began under Augustus, and the deceased are indicated as freedmen; in only two instances—a baker and a surveyor—is there mention of a trade or profession. Several painted stucco wall-surfaces have been found; and the startling picture of a lion feasting on the gory head of a bull, with a secondary register showing some scenes of Nile life, which is reproduced in Figure 3, has been detached from one of the tombs and taken to the above-mentioned antiquarium: it is one of the outstanding examples of Roman painting of about the year 150 of our era.

In the north of Italy, we can chronicle the discovery of another tower of the city wall of ancient Turin. At Trieste, a large basilica of the period of Trajan has been found: it has three naves, and at each end an apse, and is over 250 feet in length by some 70 feet in width. For some years past, the extensive reclamation works near the mouths of the Po have been revealing the tombs of the Graeco-Etruscan city of Spina, with their apparently inexhaustible ceramic contents. The objects from over 1200 of these burials have now been installed in a specially founded museum in the historic palace of Lodovico il Moro at Ferrara.

Events in Etruria and the neighboring regions are too numerous to mention; but one outstanding topographical achievement must be recorded: the



FIG. 1.—THE ROAD FROM OSTIA TOWARDS LAURENTUM WITH ITS TOMBS
(Courtesy of G. Calza)



FIG. 2.—DETAILED VIEW OF THE SAME BURIAL AREA
(Courtesy of G. Calza)

century-old riddle of Tarquinii has at last been solved by Dr. Romanelli, who has identified and excavated the wall of the Etruscan city, running

were some interesting votive terracottas—male and female heads, architectural fragments, and in particular three two-headed herms, perhaps the



FIG. 3.—PICTURE OF A LION FROM A TOMB AT OSTIA
(Courtesy of G. Calza)

about the edge of the now abandoned hill called *Civita*. In some of the newly-excavated stretches, where the wall had been hidden to a depth of almost 10 feet, it has been recovered in a far better state of preservation than the portions already above ground. For a distance of about 150 feet it consists of a facing of six courses of well cut and well joined blocks, and within this a mass of rubble, in places reaching a total thickness of about 5 feet—a combination of masonry wall and *agger*. At one natural point of approach, the lowest part of the hill, a gate has come to light, over 10 feet wide, with the two side-posts constructed of blocks of stone still standing; the level of the paved road which passed through was raised in antiquity. Among the finds were a number of coarse iron nails, which clearly belonged to the metal-work of the panels of the gate themselves; these were also attested by carbonized and pulverized remains of wood. Not far from the gate

personifications of the gate itself; their date is the second or first century B.C.

The administration of that great institution, the Naples Museum, is nearing the completion of its heavy task, the re-arrangement of a large part of its collections of sculpture, vases and minor arts in the halls which a few years ago were threatened with collapse, but the stability of which has now been ensured within all reasonable limits. The results are impressive: the numerous newcomers to the collections have made their *début* in favorable conditions, and many of the old familiar objects have taken on a new significance in their new setting. Figures 4, 5, and 6 speak for themselves as to the skill with which this delicate undertaking has been accomplished. The result is a very real creation of scientific utility and aesthetic beauty.

As to the surprising developments near the mouth of the River Silarus—the discovery of a



FIG. 4.—NAPLES MUSEUM: HALL OF THE FARNESE BULL. TO THE RIGHT, THE VENUS FROM CAPUA; AT THE END OF THE HALL, THE FARNESE HERCULES
(Courtesy of A. Maiuri)



FIG. 5. — NAPLES MUSEUM: ONE OF THE NEW HALLS OF PAINTING
(Courtesy of A. Maiuri)



Fig. 6. — NAPLES MUSEUM: THE NEWLY-INSTALLED COLLECTION OF VASES FROM RUVO AND CANOSA
(Courtesy of A. Maiuri)



FIG. 7.—TERRACOTTA SIMA FROM TARENTUM: LENGTH, M. 0.64; HEIGHT, 0.16 (INV. 50777)
(Courtesy of R. Bartoccini)



FIG. 8.—LATE ARCHAIC UNINSCRIBED "PANATHENAIC" AMPHORA FROM TARENTUM

(Cf. P. Mingazzini, *Vasi della Collezione Castellani*, pp. 271 (No. 508), 352-4 (Inv. 50290).)

(Courtesy of R. Bartoccini)



FIG. 9.—REVERSE OF THE SAME VASE: A WRESTLING MATCH

large sanctuary with two temples, one early and the other late archaic, and a third edifice, a sacrificial pit, a stratum of Protocorinthian and Corinthian ware, many dedications, and a Hellenistic deposit of many thousands of terracottas, all this forms the subject of a separate article in this JOURNAL (XL, 1936, pp. 185-187). The excep-

tionally severe rains of the spring of 1936 have, unfortunately, hampered the further efforts of the excavators, which at present are directed towards the remains of the indigenous population of the vicinity.

This is an interesting moment for the antiquities of Calabria, Apulia and Japygia, owing to the



FIG. 10.—TWO EARLY TERRACOTTA ACROTHERIAL FIGURES FROM TARENTUM: HEIGHT, M. 0.615 AND 0.67
RESPECTIVELY (INVENTORY NOS. 50783, 50782)
(Courtesy of R. Bartoccini)



FIG. 11.—MINOR ARTS OF LATER PERIODS AT TARENTUM: TERRACOTTA FIGURINES, ETC. (INV. 50313-50331)
(Courtesy of R. Bartoccini)

activities of the *Soprintendenza* which covers those important regions and has its headquarters at Bari. Dr. Renato Bartoccini is devoting especial attention to the investigation of Tarentum,

where a new museum building also is in course of erection. His methods of exact observation of the excavations and of the objects as found have produced results which will win general recogni-



FIG. 12.—RED-FIGURE KALYX KRATER FROM TARENTUM OF SOUTH ITALIAN FABRIC. HEIGHT, M. 0.524;
DIAMETER, 0.535
(Courtesy of R. Bartoccini)

tion as soon as his extensive report has appeared, in the second installment of *Notizie degli Scavi* for the year 1936. Dr. Bartoccini's generosity makes it possible to place before the readers of this JOURNAL, in Figures 7-12, a selection from his more remarkable Tarentine finds; some of these are quite new in type, all are choice pieces, and

taken together they convey a vivid impression of the prosperity, the high culture, and the varied commercial and artistic relations of that proud and historic city.

A. W. VAN BUREN

AMERICAN ACADEMY IN ROME

May 19, 1936

BOOK REVIEWS

TELEILĀT GHASSŪL. I: COMPTE RENDU DES FOUILLES DE L'INSTITUT BIBLIQUE PONTIFICALE, 1929-1932, by Alexis Mallon, S.J., Robert Koeppel, S.J., and René Neuville. Pp. xviii+193, with 67 figs. in the text and 73 pls. (9 colored). Rome, Pontifical Biblical Institute, 1934. 140 lire.

The publication of this handsome volume nearly coincided with the untimely death of its chief author, who organized and directed the excavations at this site for five campaigns (1929-34), the first three of which are here recorded. The book illustrates the many admirable qualities of the distinguished author, including indomitable courage and sacrificial patience, pioneering enthusiasm for archaeological research, limpid style, caution in drawing conclusions. The reviewer first became acquainted with R. P. Mallon on the Dead Sea expedition of 1924, with which the latter was associated. In later years our friendship continued, though we were kept apart by increasing divergence of views as time went on.

In 1924 Mallon made a notable addition to the success of the Dead Sea expedition (for the official account see provisionally *Bull. Am. Sch. Or. Res.*, No. 14) by his discovery of the Early Bronze site of Bāb ed-Drā', east of the Dead Sea. His interest in the archaeological problems of the Jordan Valley, which began then, continued to grow, culminating in his discovery of the site of Ghassûl (January, 1929), and his subsequent excavations there. Though his health was too frail to permit him to concentrate his forces on the excavation, he devoted himself to it as much as possible from the beginning of the work until his death, which was the direct outcome of over-exertion. During the first campaign he was assisted by M. René Neuville, the brilliant young chancellor of the French Consulate-general in Jerusalem, who has won scholarly laurels by his researches in Palestinian prehistory. During subsequent campaigns he enjoyed the increasing coöperation of Fr. Koeppel, a geologist and physical geographer by training. The scientific side of the excavation owes very much to Koeppel, who cleared up the stratigraphy of the site, prepared the plans, and was in direct charge of the *chantier* during most of the fourth and fifth campaigns. The value of this coöperation will be seen when the next volume

appears; fortunately Koeppel will direct the future excavation, according to present plans. Since Mallon had practically no training as an excavator before beginning work at Ghassûl, it is not surprising that the stratigraphy and recording was weak at first. Moreover there was no chronological or comparative material to guide him, since the culture of our site is brand new, as we shall see.

Shortly after the appearance of *Teleilāt Ghassûl*, Père Vincent, the leading authority on Palestinian archaeology, published a very valuable review of nearly sixty pages (*Revue Biblique*, 1935, pp. 69-104, 220-44), in which he subjected Mallon's work to an exhaustive critical analysis. The present reviewer believes, however, that Vincent has exaggerated the stratigraphic confusion, and that we may in general follow the authors' indications. Vincent believes that the authors were wrong in concluding from the results of their soundings, compared with finds in the top stratum, that there was little evolution of forms in the four strata which they have tentatively distinguished; the present reviewer is convinced, on the contrary, that they are correct in treating the Ghassulian culture as essentially homogeneous. On the other hand, Vincent is too favorable in his judgment of the pottery drawings, which are in part very inaccurate, as has been discovered by Dr. C. S. Fisher of the American School in Jerusalem, when he compared the published drawings with the originals for the purpose of his Corpus. For example, the interesting pithos on p. 103, Fig. 53, bears only a general resemblance to the original: both details and relative dimensions are false.

Leaving other points to Vincent's masterly review, we may devote ourselves to the chronological problem. Both Mallon and the reviewer called this culture aeneolithic (or chalcolithic) from 1929 on; it soon appeared, however, that we employed the term in radically different senses. For Mallon "aeneolithic" meant the period which came to an end about 2000 B.C., and was followed by the period ordinarily called Middle Bronze, which he defined very vaguely. In any case, because of some unclear analogies, he brought the end of the Ghassulian culture down to the early part of Middle Bronze, fixing it roughly about 1900 B.C. The reviewer, on the other hand, insisted that the Early Bronze must be placed between Middle

Bronze and Ghassulian, pointing out that Early Bronze pottery was already attested in the time of the First Egyptian Dynasty, i.e., not later than the twenty-ninth century B.C., following a minimum chronology. The latest possible date for the end of the Ghassulian was, therefore, the very beginning of the third millennium, a full thousand years earlier than Mallon's date. Since then Mallon's chronology has been adopted, at first hesitatingly, by Vincent (who refused, however, to follow Mallon in his identification of Ghassûl with one of the towns of the Sodomite Tetrapolis mentioned in Genesis) and by numerous other scholars. It is true that the list of adherents Mallon gave on several occasions, which included the names of Fisher and Petrie (both of whom expressed radically different views to the reviewer, while Petrie published a statement associating the Ghassulian with middle Egyptian Predynastic), Vincent, Garstang, Sukenik, and Welter, was very strange, especially since at least one of the men mentioned then knew little or nothing about the questions involved. The anthropologist Frobenius went as far as to assert (January, 1935) that the Ghassulian culture must be dated about 1700 B.C., though he was quite new to the field. Subsequently Mallon pushed back his date for the beginning of the culture to the late fourth millennium, while the reviewer raised his date for the end of it to the middle of the same millennium. Mallon thus made the Ghassulian begin before the Early Bronze, run parallel with it for many centuries, if not a full millennium, and outlive it at the end. Since, in spite of fancied similarities in detail, the two cultures are absolutely distinct both in pottery and in flint artifacts (so emphatically Neuville) the improbability of such a view will be obvious to any archaeologist in another field. Moreover, at least eight other sites containing Ghassulian remains, scattered over Palestine among scores of Early Bronze sites, are now known, so this symbiosis between the two cultures would have to be very intimate, with virtually no interchange of cultural elements between adjacent settlements. This is, of course, impossible *a priori*.

The reviewer's consistent opposition to the late chronology was originally based on the fact that Turville-Petre had discovered the same type of pottery in a cave in the Wâdi Šālḥah in Galilee, in the spring of 1926 (*Researches in Prehistoric Galilee*, London, 1927, pp. 114-15, Pls. XXVIII and XXIX, C-F). Moreover, the stratum con-

taining this ware was separated from the layer above, which contained pure Early Bronze, by a sterile layer consisting of large blocks of limestone (shaken down by an earthquake). The Early Bronze above was dated by the reviewer in 1926-29 to the middle of the third millennium; we now know that it must be dated about the first third of this millennium (to which it was, incidentally, correctly attributed at the time by Vincent). Miss Garrod discovered the same ceramic culture, again, in the lowest pottery-bearing level in the Mughâret el-Wâd, three years later.

The excavations at Megiddo, Beth-shan, the Wâdi Ghazzeh, etc., between 1930 and 1933 really settled the debate in favor of the high chronology; cf. the reviewer's observations in the *Bulletin of the American Schools of Oriental Research*, No. 42, 1931, pp. 13-5; No. 48, 1932, pp. 10-13; *Annual*, Vol. XII, 1932, pp. 1-4; Vol. XIII, 1933, pp. 57-8; *Jour. Pal. Or. Soc.*, 1935, pp. 199-208. Unfortunately, the acceptance by Engberg and Shipton (1933) of Vincent's chronology of Ghassûl, which involved them in a puzzling chronological *impasse*, and Watzinger's abandonment of the reviewer's chronology of the Ghassulian in favor of Vincent's and Mallon's (cf. *Jour. Pal. Or. Soc.*, 1936, p. 51, below), have delayed progress materially here. Meanwhile, however (1934-35), the remarkable discoveries at et-Tell (Ai) by Mme. Marquet have finally established the chronology of Early Bronze on a solid basis, and we now know that its first phase began some two or three centuries before the beginning of the first Dynasty in Egypt (minimum date ca. 2900 B.C.). Before Early Bronze comes the late Chalcolithic of Megiddo and Beth-shan. Garstang's excavations at Jericho in 1935 have finally established the stratigraphical sequence Tahanian-Ghassulian-Early Bronze beyond the shadow of a doubt, so the question becomes one of rather academic interest. Whether the minimum date for the end of the Ghassulian culture can be set at ca. 3500, or whether it must be pushed back to about 4000 B.C., is not yet certain, and may not be determined for some years.

We owe a debt of gratitude to Fr. Mallon for the devotion and the patience which are incorporated in the first volume of the Ghassûl publication. May it be followed by others, whose higher standards will embody the vision of the man who organized this important undertaking!

W. F. ALBRIGHT

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DIE FELSBLDER VON YAZILIKAYA (Istanbul Forschungen herausgegeben von der Abteilung Istanbul des Archäologischen Institutes des Deutschen Reiches, Vol. 5), by Kurt Bittel. Pp. 11, 31 pls. Bamberg, 1934. RM. 10.

PRÄHISTORISCHE FORSCHUNG IN KLEINASIEN (Istanbul Forschungen, Vol. 6), by Kurt Bittel. Pp. vii+147, and 20 pls. with folding map. Istanbul, 1934. RM. 13.50.

By his yearly campaigns of excavation at Boğazköy (the official Turkish spelling today) since 1931, conducted in a masterly way with the fullest use of modern archaeological methods and technique, Bittel has made himself one of the foremost authorities on Prehellenic Asia Minor. The studies before us show that he has neglected no opportunity to master the available comparative material from other Anatolian sites, so we may hereafter look to him for authoritative statements on all subjects within his field. Both monographs are excellent.

In the first study, Bittel brings adequate direct photographs of the reliefs of Yazilikaya, supplemented by photographs of several of Humann's plaster casts. The photogravures are not extremely good, but they are satisfactory, and we may be thankful for the welcome addition to our material for study of these unique documents of Hittite art. The long debate about their age, vividly illustrated by Bittel's nearly exhaustive list of views on their chronology, has now been settled by his 1935 campaign, in which he excavated at the foot of the reliefs, discovering remains of cult-installations of the thirteenth century B.C. The views of Sayce and Garstang, supported from the standpoint of the history of art by V. Müller and Moortgat, among others, have thus been proved correct, against the position taken by Puchstein and more recently adopted by von der Osten, Christian, and the reviewer, who held that they were later than 1200 B.C.

The second monograph is the most valuable comparative archaeological study of the Bronze Age cultures of Asia Minor that has yet appeared. The title is rather misleading, since hardly any attention at all is paid to the limited data available for the Stone Age, and practically the entire book is devoted to the latest Neolithic, the Early and Middle Bronze ages.

In Chapter 3, A. Bittel gives a judicious survey of the stratigraphic evidence available from the excavations hitherto undertaken, mainly from Sakçegözü, Alişar, the Protesilaus-hill, and Troy.

The cultural position of the first site between Anatolia and Syria-Mesopotamia is now certain, since the painted chalcolithic ware belongs definitely with the painted ware of Carchemish, and especially with Râs esh-Shamrah and Hamath on the Orontes, neither of which sites had been archaeologically investigated when Bittel wrote the book before us. The painted ware of Sakçegözü may be compared most closely with that of the so-called third stratum of Râs esh-Shamrah (*Syria*, XV, 110), which must be dated entirely before ca. 3500 B.C. Since the excavators were first inclined to date this stratum entirely in the third millennium, a few further observations are necessary. Less than forty kilometers south of this site lie the mounds of Tell Sukâs and Qal'at er-Rûs, which were sounded in 1934 by E. Forrer, and which yielded valuable stratigraphic series of sherds, now at Bryn Mawr. Thanks to the recently established correlation between the Early Bronze and late chalcolithic series of Palestine, on the one hand, and Egyptian chronology on the other, we can now date the earliest remains there well before the First Dynasty, i.e., before 3000, employing minimum dates (cf. *Jour. Pal. Or. Soc.*, 1935, 208 ff.). This means that the painted-pottery cultures must be pushed back before this date—and well before it, since they are separated from it by the period of gray-burnished ware, best known from Megiddo (cf. also *A.J.A.*, 1935, 146 b; 1936, 163 b). Bittel's date for the incised black ware of Sakçegözü (not before 3000) must then be changed to not after 3500 B.C.

In his discussion of the chronology of the Oriental Institute excavations at Alişar, the author agrees with von der Osten's revised system in the main, especially since it is partly based on his own work at Boğazköy. After the latter it became clear that the period now known as IV was not Late Hittite Empire (fourteenth-thirteenth centuries) but belongs to the post-Hittite period (as already pointed out by the present reviewer on the basis of Syro-Palestinian, Cypriote, and Aegean parallels, *Jour. Am. Or. Soc.*, 1931, 174). "III" precedes "II" in the main. It should be added that the pottery of "III" has very important parallels in Syria, Palestine, and Cyprus, with Syria as the center of distribution (so also, in part, Frankfort). The most important decorative motive, bands of multiple (usually quadruple) lines, usually crossing one another, has been discussed by the reviewer (cf. *Annual Am. Sch. Or. Res.*, XIII,

1933, p. 74, § 25). Its range seems to be from the nineteenth to the seventeenth century. Since the forms of the vases are quite different, the influence does not appear to go beyond the decoration. Whether Syria or Cappadocia was the borrower is not clear with our present evidence; historical probability suggests the latter. Bittel allows a scope of some seven centuries for this ware (2300–1600 B.C.), which is clearly too liberal, so our analogy may have important chronological implications.

Bittel's discussion of the stratigraphy of Troy became antiquated in 1933 by Blegen's further excavations there, as is correctly stated in an evidently added footnote on p. 20 (cf. the second paragraph on p. 21, also added after the book was in press, to judge from the context). Stratum VI begins in the seventeenth century, roughly speaking. Bittel has vigorously opposed and disproved Åberg's learned, but wild attempt to date Troy I and II between 1700 and 1500, i.e., five-six strata too late.

The problem of the relationship between gray and black (or red) burnished pottery in Asia Minor and similar ware in Mesopotamia, Palestine, and Syria is very difficult. Bittel correctly opposes Frankfort's effort to bring the Uruk gray ware into closer relation to the Yortan pottery of Western Asia Minor, placed by the latter between Troy I and II, while the former prefers to connect it more closely with Troy II. In *Iraq*, II, 1935, pp. 211–22, R. W. Hutchinson has also expressed himself against Frankfort. It should be remarked in this connection that the closest analogy to the Uruk type is now furnished by the gray-burnished ware of Palestine and Syria which has been discussed by the reviewer, *Jour. Pal. Or. Soc.*, 1935, 205 ff.; this ware may be dated roughly between 3500 and 3200 (using minimum Egyptian chronology) in both Babylonia and Palestine (where it may fall in part somewhat later, however), according to the reviewer's observations, *Bull. Am. Sch. Or. Res.*, No. 60, pp. 6–7. The Yortan ware is distantly related to the black and red-burnished pottery of Palestine in Early Bronze c, which is to be dated between 2600 and 2400 (2300); cf. *Bull. Am. Sch. Or. Res.*, No. 57, pp. 29–30. For its occurrence in northern Syria see provisionally *A.J.A.*, 1936, 164 b. More closely related to the Syrian pottery is the vase from Alişar I figured in *Alişar*, 1928–1929, Part I, p. 44, Fig. 47. How we can give more precise dates than the first half of the third millennium for Troy I and the second

half for Troy II is not clear to the reviewer, in the absence of clear-cut synchronisms.

Without going into detail, since this would take us far beyond the allotted space, it may be said that Bittel shows a tendency to date his material too low—a conservative trend, which is justified as a reaction against the high chronology of some scholars, but which will probably have to be corrected in its turn. As we have seen, the earliest occupation of Sakçegözü must be dated a thousand years or more earlier; his date for the first settlement of Alişar will also presumably be too low.

The monograph is filled with valuable information and sound observations; it also contains a complete list of relevant sites with a full bibliography. For years it will remain a reliable guide through the obscurities of early Anatolian archaeology. We congratulate the author and eagerly await his next contribution to the subject.

W. F. ALBRIGHT

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ROYAL SARCOPHAGI OF THE XVIIIth DYNASTY,
by William C. Hayes (Princeton Monographs in
Art and Archaeology: Quarto Series XIX).
Pp. xii+211, frontispiece, 25 figs., 25 pls. 4to.
Princeton University Press, 1935. \$10.00.

This well-written volume deals with a closed series of nine royal sarcophagi of the pre-Akhenaten portion of the XVIIIth Egyptian Dynasty. The author has succeeded admirably, not only in furnishing a complete and convenient presentation of the facts, but in deducing from the combination of internal and external evidences the true chronological order of the sarcophagi concerned and the bearing of that order upon the history of the XVIIIth Dynasty. Going even beyond this, he has brought out also the place of these sarcophagi in the history of Egyptian religion and Egyptian craftsmanship.

By close-knit reasoning, based on developments in tomb style as well as in sarcophagus form and decoration, the author establishes Tuthmosis II's ownership of the unfinished tomb No. 42 in Bibân el Molûk and of the unfinished sarcophagus found therein and proves also that the sarcophagus found in the tomb of Tuthmosis I was made for that pharaoh by Tuthmosis III.

All the factors considered converge to establish the succession of mid-XVIIIth Dynasty rulers in the order Tuthmosis I, Tuthmosis II, Tuthmosis III, Hatshepsût and Tuthmosis III, Tuthmosis III, an order already evidenced by the researches

of Eduard Meyer, Winlock, and Edgerton along other lines. Questions which Edgerton has raised in his paper on *The Thutmosid Succession* should still be borne in mind as bearing on the relative lengths of the reigns of Tuthmosis I and Tuthmosis II, discussed by Hayes on pp. 144 f.

On the religious side the author deals with the relation of the sarcophagus inscriptions to the development of the Empire Book of the Dead. He has assembled all the texts found on the eight inscribed sarcophagi, putting the parallel texts together and showing by diagrams the exact location of each text in each instance. He has also tabulated the parallels found in the Pyramid Texts and on Middle Kingdom coffins. His presentation is useful for comparative study of the spells of the Book of the Dead, though his comments on the latter need some modifications. Thus the "earliest extant Book of the Dead written on papyrus" (see his p. 95) is not that of Nebseni; Middle Kingdom papyrus fragments of this nature were published by Grapow in 1915 and by Capart in 1934. As to Spell 72, it is found not only as early as the sarcophagus of Tuthmosis I, but even in the Middle Kingdom (cf. Lacau in the *Cairo Catalogue général*). In the religious scenes in Tuthmosis III's sepulchral hall, mentioned by Hayes on p. 23, that king's physical mother Isis in the upper scene is surely not "the same Isis" as the tree-goddess who is called "his mother" in the lower scene.

To the extensive "Selective Bibliography" should properly be added the *Supplement* to Gardiner's *Egyptian Grammar* (Neuilly-sur-Seine, 1935) and the second edition (1934) of A. Lucas, *Ancient Egyptian Materials*.

T. GEORGE ALLEN

UNIVERSITY OF CHICAGO

ED DÄKHLEH OASIS, by H. E. Winlock. *Journal of a Camel Trip Made in 1908*, with an Appendix by Ludlow Bull (The Metropolitan Museum of Art. Department of Egyptian Art, Vol. V). Pp. xii+77, 37 pls. Folio. New York, The Metropolitan Museum of Art, 1936. \$3.00.

In bygone days, when he was attached to the Egyptian Expedition of the Metropolitan Museum, Mr. Winlock, now director of that institution, found the opportunity to journey from el Khārgēh Oasis, where the Expedition was then working, to the less accessible oasis called ed Dākhleh. His heretofore unpublished record of

that trip, taken subject to the difficulties of the pre-automobile era, is valuable for its descriptions, not only of the antiquities which he observed, but of the life which he found about him. Until a more elaborate survey is made, this record will stand as the best statement yet available of the archaeological and historical aspects of ed Dākhleh Oasis. The author's "conclusions" constitute a history of the region from late palaeolithic through Roman times.

On the basis of all available hand copies and photographs, the editor, Dr. Ludlow S. Bull, deals with the Egyptian hieroglyphic inscriptions of the most important building described, the sandstone Roman temple of Deir el Hagar—inscriptions which have previously been almost unknown. Professor W. F. Edgerton, of the University of Chicago, has coöperated with Dr. Bull in the study of these difficult Roman texts.

T. GEORGE ALLEN

UNIVERSITY OF CHICAGO

MATERIAL REMAINS OF THE MEGIDDO CULT, *Oriental Institute Publications*, Vol. XXVI, by H. G. May and R. M. Engberg. Pp. xiv+51 with 13 figs. in text; 41 pls. University of Chicago Press, 1935. \$6.00.

This latest addition to the series of *Oriental Institute Publications* deals with the material remains of the popular religion of Palestine which were uncovered from 1926 to 1933. They extend over a period of considerable length, but the most significant remains come from Stratum IV (representing in the main the Solomonic Age) and Stratum V (end of Early Iron). The structures of these two levels are discussed in Chapter II, and the plausible theory is advanced that the proto-Ionic capitals found in débris or re-used in later structures belonged to the shrine of Stratum IV. Pottery shrines found in the vicinity help in the reconstruction of the original edifice. The temple furnishings are discussed in Chapters III and IV, with the former given over to such instruments of the cult as altars and model shrines, while the latter is limited to figurines, human and animal. In the concluding section Mr. Engberg discusses tree designs on pottery and their bearing on the origin of proto-Ionic capitals.

Although the account before us is comparatively brief, it may be characterized as exceptionally "meaty." Certainly no adequate idea of the numerous details involved and of the problems raised can be given in a brief review. The

documentation is satisfactory and the illustrations are exceptionally clear, even for a publication of the Oriental Institute. Special attention may be called, nevertheless, to two features. The work before us presents for the first time varied material witnesses of the Palestinian cult in the age of David and Solomon. Secondly, fresh light is shed on the problem of the proto-Ionic capitals. Their ancestry is still a matter of dispute, but similar conceptions in miniature have been traced to North Syria and Assyria. An ultimate solution must await a clearer understanding of that art, to which the misleading name, "Syro-Hittite," is still occasionally applied.

E. A. SPEISER

UNIVERSITY OF PENNSYLVANIA

SENNACHERIB'S AQUEDUCT AT JERWAN. *Oriental Institute Publications*, Vol. XXIV, by *Thor-kild Jacobsen* and *Seton Lloyd*. Pp. xii+52; frontispiece and 36 pls. University of Chicago Press, 1935. \$5.00.

The village of Jerwan, which has given its name to the imposing remains of the aqueduct described in this volume, is situated near the modern settlement of 'Ain Sifni (which local tradition connects with the story of the Flood) and close to the famous sculptures of Bavian. Several previous visitors, including the reviewer, had inspected the structure and identified it as the work of Sennacherib, but it has remained for the present authors to realize the full importance of the aqueduct, for which no parallel can be adduced from pre-Roman times. Dr. Jacobsen gives an admirable account of the relevant inscriptional sources, while Mr. Lloyd contributes the engineering details. The book is a unique commentary on an important phase of Assyrian civilization.

E. A. SPEISER

UNIVERSITY OF PENNSYLVANIA

THE MEGIDDO WATER SYSTEM. *Oriental Institute Publications*, Vol. XXII, by *Robert S. Lamon*. Pp. xii+40, with 30 ills. in text; 8 pls. University of Chicago Press, 1935. \$3.00.

It goes without saying that an important fortress like Megiddo must have had an adequate water-supply during, say, the period of the XVIIIth Dynasty. But the source of that supply is as yet unknown. The excavators have been fortunate, however, in reconstructing the water system that was in operation for centuries, following the migration of the Sea Peoples. This sys-

tem originated in a large cave at the southwest edge of the mound. The cave seems to owe its origin, in turn, to what must once have been a surface spring, that was gradually deepened into a well as the inhabitants pursued the dwindling water into the ground. A reliable supply and convenient access to it were assured by means of a gallery, a blocking wall, and a shaft and tunnels. The history of these several constructions is carefully traced and the work is abundantly illustrated.

E. A. SPEISER

UNIVERSITY OF PENNSYLVANIA

BRONZEZEIT UND FRÜHE EISENZEIT IN ITALIEN, PFAHLBAU, TERRAMARE, VILLANOVA, by *Franz Messerschmidt*. Pp. 77, 16 pls. Berlin and Leipzig, De Gruyter, 1935. RM. 12.

Some twenty years ago things looked simple to the student of Italic archaeology. First the prehistoric Ligurian populace inhabited Italy, then the terramare people and the lake-dwellers marched in, spread, and gave way to their offspring, the Villanovans and the Romans; this was about all that one had to know. The great activity of the Italian archaeologists during the past decades has done away with this simple scheme. Energetic and accurate explorations have brought to light fresh material and are still doing so at a rate which makes it extremely hard for anyone outside Italy to gain insight into the present complicated situation.

F. Messerschmidt, the foremost German authority in the field of Italic archaeology, has undertaken in his book the laborious and thankless task of ordering and presenting in a survey the significant problems and the main views of modern scholars on the intricate questions of Italic archaeology, according to the most recent results of excavations. It is much to be regretted that he has excluded from his illuminating discussion southwestern Italy, Sicily, and Sardinia. Dr. Messerschmidt approaches his task with a first-hand knowledge of Italic antiquities, with an altogether admirable command of the widely scattered bibliography, and with a gratifying amount of critical judgment and even scepticism. His book certainly represents the best concise and wholly impartial survey of Italic archaeology available at present, and may be recommended to anyone interested in early Italy, no matter whether from the standpoint of archaeology, history, or religion. The author's starting

point is the historical question: "How far back can we trace the historical tribes and nations of Italy?" (p. 25). Accordingly, one finds everywhere clever bits of historical observation, e.g. on the different character of the settlements of the *extraterramaricoli*, the terramare dwellers, the Villanovans, and the Etruscans (pp. 17 f., 24), or on afterlife in the religion of the Villanovans (p. 29), or on the development from community-life to individualism in prehistoric times (pp. 15, 17, 34 f., 45 f.). There is no room here for a description of all the important problems which Messerschmidt presents, weighing carefully *pro* and *con*, but some results demand general attention: thus *no terramare*, according to the author, *has ever been completely excavated*. The current theories, therefore, in which the Roman camp is derived from the terramare-plan, the *mundus* from sacrificial pits in the terramare, and in which Rome is considered a terramare-settlement, rest on an undocumented foundation. Another important point, brought out by the author, concerns the bucchero ware. This technique, often considered typically Etruscan, already appears in the settlements of the *extraterramaricoli*, who inhabited most of southeastern and middle Italy down to the beginning of the first millennium B.C. (p. 18).

Messerschmidt's trenchant scepticism is justly triumphant in his discussion of the origin of the Etruscans, a discussion which all scholars who take the immigration from Asia Minor for granted, will find worth reading. The critical attitude of the author transforms, however, on this occasion *summum ius* into *summa iniuria*. For, though he clearly shows that none of the arguments for an Oriental origin is cogent, he fails to demonstrate the insuperable difficulties of the autochthonic theory (cf. Matz, *Gnomon* V, 1929, pp. 102 ff.).

Since the need of methodical approach is so much emphasized in Messerschmidt's book, the reviewer feels obliged to take exception to one principle advocated by him. He repeatedly claims that "cultures and types migrate, transmitted partly by single craftsmen or architects" (p. 10). This principle may work for types, such as the *ansa lunata*, but how are archaeologists to build up any theories in future, if they are not permitted to assume that a culture, i.e. a unit embracing all expressions of human life, does correspond to a given national or political unit? Leopold's attempt to explain away everything that looks different in the terramare culture under

this assumption, best illustrates the danger of the principle.

The reviewer has the following corrections and additions to offer: p. 16, "*In den Terramare fehlt der Mensch vollständig*." Human figurines are reported from Castellaro near Vhò (Antonielli, *Ipek* I, 1925, p. 64, 2-4; p. 17). Commerce between the terramare and the Orient: the arrowheads, Pl. VI, recall the Cypriote type (cf. G. M. A. Richter, *Metr. Mus. Bronzes*, Nos. 1499 ff.; p. 36). For the conservatism of Latium, cf. I. Scott-Ryberg, *A.J.A.* XL, 1936, p. 124; p. 38, note 6, and 40; Fiesel's and Taramelli's opinions are the opposite of what they are reported to be, p. 46: nobody supposes that the Babylonians and the Etruscans are "identical." The general similarities in religion cannot be disputed (Cf. De Ruyt, *Charun*, Bruxelles, 1934, pp. 241 f.; p. 48). The importations from Etruria to Picenum are now collected by P. Marconi, *Mon. Ant.* XXXV, 1935, pp. 434 f. The interesting barbarian sculptures from Nesazio in Venetia are hardly "*fast mykenisch anmutend*." They are probably influenced by Ionic models, either directly, or by way of northern Greece (cf. Tamaro, *Bull. Paletn. It.*, XLVII, 1927, pp. 119 ff.).

We must finally warn the reader against overlooking the text describing the plates and the very useful parallels and bibliographies it contains. On the plates are reproduced representative specimens of the cultures discussed, among them many unpublished objects of the Museo Pigorini in Rome.

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DIE ANTIKEN MÜNZEN NORD-GRIECHENLANDS. MAKEDONIA UND PAIONIA. BAND III, ZWEITE ABTEILUNG, by Hugo Gaebler. Pp. vii+234, pls. XL. Berlin, de Gruyter & Co., 1935.

This long awaited continuation of the Berlin Corpus now lies before us from the able pen of Dr. Gaebler. The new volume commences (pp. 1-18) with a much abbreviated epitome (the reason for whose presence here is not readily fathomed) of the coins more fully described and satisfactorily discussed by Dr. Gaebler himself in the first portion of Volume III which appeared in 1906. These coins comprise the divisional silver and copper pieces of "autonomous" types struck under Philip V and Perseus in the various districts of Macedonia, together with the succeeding

issues of the Macedonians under Roman rule and that of the rebel, Andriskos; and, finally, the issues of Macedonia as a Roman province in republican and imperial times. There then follow (pp. 18-133), in alphabetical order, the autonomous and imperial issues of the Macedonian cities and tribes from the sixth century B.C. to the third century A.D. To these succeed (pp. 133-148) uncertain or unattributed coins of the district and the issues of various Macedonian or Thracio-Macedonian dynasts, such as Getas, Doki-, Mosses, Demetrios, Nikarchos, Bastares and Adaios. Following these are described (pp. 148-197) the strictly royal issues of the Macedonian kings from Alexander I to Philip VI Andriskos; the gold issues of T. Quinctius Flamininus (pp. 197-8); and the coinages of the Paonian kings (pp. 199-206). Finally, pp. 207-218 are devoted to a list of what in Dr. Gaebler's opinion are modern forgeries. There follow six useful indices: (I) Kings and Dynasts, (II) Magistrates, (III) Types, (IV) Symbols, (V) Varia, (VI) Concordance between plates and text. The volume closes with forty excellent plates.

It does not imply the slightest derogation of Dr. Gaebler's proved ability and greatly respected scholarship to say that, to the reviewer at least, the volume is a very great disappointment. Instead of being a real continuation of the justly appreciated Berlin Corpus—which does constitute an actual corpus of the other coinages of Macedonia, Thrace and Mysia—the present volume is little more than a compendium of the principal types, with some scattered notes, in lieu of an adequate discussion. The splendid and prolific sixth to fourth century issues of such great coining centres as, for instance, Akanthos, Mende, Olynthos, Philippi, Potidaia, etc., are here represented only by selected pieces, which may give a bird's-eye view, but cannot possibly present a complete, or even an adequate, picture of these important coinages. For this early period the scholar and serious numismatist will doubtless still find Babelon's *Traité* the more useful assemblage. The autonomous copper coinages under Roman rule are a little more satisfactorily treated, in that most of the types are described and arranged with Dr. Gaebler's customary acumen and ability, and so present a distinct advance in our knowledge. A few special groups of this series have been fully described and discussed elsewhere by the author (cf. various articles in the *Zeitschrift für Numismatik*), but the lack of fuller notes and catalogue

here is sadly felt. Little advance can be made in our knowledge of the royal coinages of the Macedonian kings by a mere catalogue of the types, interspersed with a few notes, however acute and scholarly. Hence, while this portion of the work is excellent so far as it goes, nothing further need be said of it. On the other hand, the Roman imperial issues of Macedon are most inadequately represented. The coins of only a few emperors are described for each mint and the scholar will still find himself largely dependent upon the antiquated catalogues of the London and Berlin collections and upon the still more antiquated work of Mionnet for a just appreciation of the immense imperial coinages of the Macedonian provincial cities.

It is said that the exiguity of the present volume is due to a lack of funds. In such a situation it would surely have been more advisable for Dr. Gaebler to have dispensed, for instance, with pp. 1-18 (which cover a coinage thoroughly well treated by himself in 1906) and to have limited himself to a full catalogue and discussion of some special portion (the autonomous?) of the remainder. An attempt to cover the entire field with insufficient funds results only in the necessity for some one to do the work all over again in the near future. This is a great pity, especially as Dr. Gaebler, by his wide knowledge and long experience, is himself at present the most fitted for this work.

In the interests of economy, the twelve final pages purporting to comprise a list of modern forgeries might advisably also have been omitted, or, at least, considerably abridged. For, in this field, unfortunately, Dr. Gaebler's usual acumen and critical abilities seem to have grown into a sort of hypercriticism, that at times becomes almost absurd. It is largely based on a criticism of style, but appears to be unable to distinguish between poor ancient work and modern work. In the case of Macedonia this is especially unfortunate, for there, there seems at times to have been a dearth of first class die-cutters. Recourse was naturally had to available but inferior talent, with a result that often good and poor die-cutters are found working together in the same mint and producing a diversity of coinage that has thrown panic into the author's better judgment. No one, least of all the reviewer, will probably cavil at the proclaimed spuriousness of most of the specimens gathered together on the final three plates. Pl. XXXVIII, Nos. 15-19, 21-24; Pl. XXXIX, Nos.

1-13, 18; Pl. XL, Nos. 1, 3-5, 7-24, together with Pl. VIII, No. 13; Pl. XX, No. 4; Pl. XXXIII, No. 27, are all certainly modern forgeries, and many of these have long been known and recognized as such. The reviewer, with a few reservations, would also be inclined to accept the author's condemnation of certain other coins as modern casts, a fact not readily shown by reproductions on a plate. But he does protest against the wholesale and gratuitous condemnation of such pieces, to select but the most obvious, as Pl. I, 14-17; Pl. XVII, 9; Pl. XXI, 1 (including also, probably, Nos. 2, 3 and 6 of the same plate); Pl. XXXII, 25; Pl. XXXIX, 14—most of which coins the reviewer has himself seen and studied, and which bear every outward sign of authenticity. The surprising absurdity of some of Dr. Gaebler's reasoning may well be illustrated by his remarks on the coins of Mende. On p. 75 he arbitrarily dates the tetradrachm No. 21, Pl. XV, 29, to the year 423 B.C., or shortly afterwards. He then blandly proceeds to condemn (pp. 75-6) such splendid and obviously genuine coins as Pl. I, 14-17, on the ground that by all canons of stylistic progression they must follow Pl. XV, 29, but as they are obviously earlier in style than the year 423 B.C., they must therefore be forgeries! Now this is exactly like arbitrarily dating the Olympia temple at, say, 400 B.C. and then arguing that since the Parthenon in stylistic development surely comes after Olympia but is as obviously earlier than the year 400 B.C., *ergo* the Parthenon must be a modern forgery!

Dr. Gaebler does a great disservice to the science of numismatics in so magisterially denouncing, without adequate reasons, so many perfectly authentic pieces, which, furthermore, have turned up in hoards and in scientific excavations. A former director of the Berlin coin cabinet once made the pertinent statement that though a scholar might well be forgiven for having been deceived as to the authenticity of a certain coin, what constituted an unforgivable sin was the condemnation of a *genuine* specimen. Accordingly Dr. Gaebler, in this volume as well as in two of his recent monographs, has apparently committed this very sin, several times over!

In closing, it is only fair to stress the general excellence of Dr. Gaebler's new book. The reviewer would regret any possible obscuration of this fact. He had, however, to express his surprise at the recklessness evinced by the author in condemning so many genuine coins, and to voice

his keen disappointment that the new volume fails to carry on the original intent, the high ideals, and the wide scope of the other portions of the Berlin Corpus. Though in character and contents it is not on a par with the latter, Dr. Gaebler's book is still entitled to great respect as a most scholarly piece of work and will doubtless prove very useful for all ordinary purposes.

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STRUCTURAL SURVEY OF THE CHURCH OF THE NATIVITY, BETHLEHEM, by *William Harecy*, with an Introduction by *Ernest Tatham Richmond*, Director of the Department of Antiquities in Palestine. Pp. xv+30, 122 pls., 23 drawings and sketches of details, 6 large-scale plans and sections. Oxford University Press, 1935, \$12.00.

The plan and scope of this work is identical with that of its companion volume by the same authors on the Church of the Holy Sepulchre at Jerusalem. It differs in that, while the church with which it deals is architecturally less interesting than the other, the archaeological discoveries made by excavations in and about the structure are of first-rate importance, largely because of the magnificent early mosaics uncovered in the nave and at the crossing. In both cases the survey was undertaken primarily to formulate a practical program for consolidation and repair, and the recommendations advanced for both are analogous.

As pointed out by Mr. Richmond in his summary of the history of the church, no detailed description of the monument erected by Constantine the Great above the Grotto of the Nativity at Bethlehem has come down to us. That it was of five-aisled basilican type, however, has been made clear by the excavations of 1934 within the church, and by those of two years earlier in the atrium. Although the discovery of a layer of charred material over part of the lately uncovered mosaic pavement of the nave seems to indicate that the Constantinian church was destroyed by fire, a sufficient reason for the important alterations made by Justinian in the sixth century may perhaps be found in needs that arose from liturgical developments. But whatever the cause, the rebuilding instituted by Justinian was thoroughgoing. Justinian lengthened the church both towards the east and the west, inserted a transept with apsidal terminations, or, at any rate, completely remodeled the eastern limb, added a narthex, built a new atrium, and laid at a higher level

a white marble pavement, considerable traces of which have been found within the church. The walls were probably sheathed with marble slabs and mosaic, the capitals gilded, the wooden architraves which rested upon them were carved, and the building completed with an elaborate roof. The subsequent history of the church was uneventful. It survived the Persian invasion of 614 and that of the Arabs some years later, and in 951 an Arab author refers to the veneration in which it was held. It is to this veneration by the Moslems that its preservation to the present time is, in part, due. Thus in 1009, it escaped the general demolition ordered by the Caliph al-Hakim, and in 1099 was presumably found intact by Tancred, who was sent by Godfrey de Bouillon to occupy Bethlehem with a force of a hundred knights. Thereafter it was sufficiently endowed to maintain its clergy and to allow for needed restoration and ornamentation.

Just what was done by the Latins in a structural sense is not recorded, although it must have been considerable, for the building itself had certainly deteriorated since the Arab invasion more than four centuries earlier. Although Mr. Richmond thinks it probable that restorations were only gradually carried out and ran over a long term of years, involving first the most urgent works, the roofs, for example, and perhaps the paving, to be followed later by the restoration of the wall-coverings of marble and mosaic, it seems at least possible to this reviewer that the Latins rebuilt the entire eastern limb of the church on a new plan. Written accounts of the church from the twelfth century onward mention the polished columns of the nave and aisles, the brilliant white marble revetment of the aisle walls, a pavement of polychrome marble, the excellently designed timber roofing, the lead sheathing of the roof, and a star of gilded copper above the ridgepole. The earlier descriptions of the mosaic decorations, however, are generalized and brief, and it is not until we reach the account of Quaresnius, 1626, that we can appreciate the elaborate and beautiful scheme of figure subjects with which the Latins filled practically all the available wall-space and of which but few scattered figures remain. An extant mosaic inscription names an artist, Basilius Pictor, and another in Greek in the choir names Ephrem as painter and mosaicist; it likewise gives two dates equivalent to 1165 and 1169. It also appears that the artists who designed and executed the mosaic decorations worked under the

direction of the Latin Bishop Raoul, while the Emperor Manuel Comnenos, King Amaury, and the Bishop himself all contributed to the cost. The existing entrances to the Grotto of the Nativity are also twelfth-century work, and the floor and walls of the cave were at this time covered with marble slabs and its roof ornamented with mosaics. When Bethlehem fell to Saladin the church did not suffer, and in 1192 it saw the reestablishment of the Latin Rite with Saladin's permission. Thirty-five years later, in 1227, two Armenians obtained leave from the Moslem authorities to set up a great double door of carved timber at the main entrance from the narthex to the nave. The upper part of this has survived and is a work of considerable interest, showing Persian and Mesopotamian influences.

Up to the end of the fourteenth century the splendid decorations of the Latins remained practically intact, but with the fifteenth century parts of the mosaics began to suffer as well as the marble revetment. After the Turkish occupation in 1516, marble was taken from the aisle walls, and by the beginning of the seventeenth century little remained. Today it has entirely disappeared. The mosaics also deteriorated, and it was in anticipation of more extensive losses that Quaresnius made his valuable record. It seems that some repairs to the roof were attempted in 1435, but the first work of importance, limited, however, to structural defects, was undertaken shortly after 1480. Timber for the roof was worked in Venice and brought to Palestine in the Republic's ships, and Edward IV of England made himself responsible for providing the leaden roofing-plates. Some two hundred years later the lead was found to have been removed in many places, and further repairs were begun by the Greeks about 1668 under the Patriarch of Jerusalem. These works were merely of a protective and structural nature. After the earthquake of 1832 the Greeks obtained permission to repair the church. The work was begun ten years later and included attending to the roof, paving the choir with marble and the nave with stone; what was left of the mosaics was surrounded by the plastering that now covers the walls. In 1809, a fire damaged the Grotto of the Nativity and completed the dilapidation of its ancient decorations. No serious repairs have been carried out during the last three generations.

The Church of the Nativity as it stands today is thought by the authors to be essentially a work of Justinian, although the uniformly Corinthian-

esque capitals employed are apparently not of characteristic sixth-century type and seem far removed from the richly coloristic capitals of such churches as Sts. Sergius and Bacchus and St. Sophia at Constantinople; indeed, they might well be Constantinian. Moreover the entire eastern limb of the church is perhaps—as will be argued later—the work of the Latins. The church was fronted on the west by a spacious forecourt or atrium, a few remains of which have been found in situ and indicate a date contemporaneous with the main body of the structure or perhaps somewhat later. East of this is the narthex, originally entered from the atrium through three monumental doorways, all of which are blocked except for a small square-headed opening reserved in the central doorway, which now forms the principal public entrance. Of the three portals which originally gave eastward from the narthex two are blocked, the great central doorway with its carved wooden valves of 1227 alone remaining open. The outer west wall of the narthex has been thrust outward alarmingly by the tunnel vault with which the Crusaders replaced the original timber roof of the vestibule. The upper part of this wall, as well as the vault itself, must hence be taken down and rebuilt, and the thrusts of the new vault restrained by steel tie-rods.

The main body of the church takes the form of a triapsidal basilica of five aisles, the nave flanked by double ranges of monolithic columns, which form eleven bays to an aisle. The construction above the Corinthianesque caps of these columns is peculiar, since, although the intercolumniations are spanned by wooden epistyles, the latter are relieved from the superincumbent weight of the aisle roofs and the clerestory walls by means of hidden stone relieving arches from column to column. The arches are of flat segmental form and spring from blocks of stone centered upon the capitals, but, since their soffits are considerably narrower than the soffits of the wooden epistyles, they were originally completely hidden. This is explained in the ingenious construction of the epistyles which consist of three beams laid side by side. The central one of the three is butted at either end against the stone blocks from which the relieving arches spring, while each of the outer beams where it passes the stone impost is halved so as to grip the block. The length of the outer timbers is sufficient to span three intercolumniations, and since each outer timber is scarfed at its ends to those in the same range, they together

form a continuous tie throughout the length of the colonnade. Since all of these timbers are too decayed to permit of their retention, they must be replaced by beams of reinforced concrete. Each aisle was originally lighted by five square-headed windows, all now blocked, and the nave is now lighted only by the round-headed windows of the clerestory. Certain shafts of the nave and aisle colonnades have been moved laterally by earthquake and many of their bases are badly shattered. The aisle walls are in fairly good condition but the upper part of the south clerestory wall must be taken down and rebuilt.

The structural state of the eastern limb of the church is more precarious than that of the nave, because of the existence of the Grotto of the Nativity, the Grotto and Chapel of the Innocents, and many other chambers and cuttings in the soft limestone underlying the site, some of them situated beneath and directly bearing the weight of columns and piers of the church above. Although arches have been constructed from time to time to fortify the rock, the entire grotto system is weak and constitutes an especial danger in time of earthquake; in fact the northwest pier of the crossing, which stands almost above the Grotto of St. Joseph, has subsided several centimeters besides suffering further dislocation, due to other causes. The transept-ends, projecting north and south beyond the lines of the aisle walls, are terminated by apses, each provided with three round-headed windows, of which those in the north are blocked. In the angles eastward of the transept and flanking the chancel are chapels, these also lighted by round-headed windows some of which are blocked. The level of the crossing is some two steps higher than the nave and transepts, while the sanctuary rests upon a third step, which is carried back into the curve of the apse. Except for the narthex and the apses, which have flat terrace roofs above their vaults, the church is covered by a trussed timber roof. The double aisles are spanned by half-trusses supporting lean-to roofs, while the main roof of double pitch is formed of a series of king-post trusses. All these timbers are worm-eaten, some are badly affected by dry-rot, others completely decayed, and the entire roofing is unsafe.

Part II of Mr. Harvey's report deals with measures of repair necessary to remedy the conditions described above. He recommends first the grouting and consolidation of the grottoes beneath the eastern limb, then the rebuilding of

the vault and west wall of the narthex, and next the grouting and pointing up of the entire wall system, the latter to be further strengthened by a continuous band of reinforced concrete, inserted in the masonry of the external walls at the level of the wall-plates of the aisle roofs, and by a second band at the level of the wall-plates of the nave roof. The fractured bases of the columns of the interior colonnades should be repaired, all displaced shafts should be reset vertically, and the decayed epistyles should be entirely removed and replaced by reinforced concrete. All timber roofs must be torn down and rebuilt in similar form of framed concrete members reinforced with stainless steel. All existing timber window frames, i.e., those of the clerestory etc., should be replaced by others of bronze made thoroughly water-tight in order to protect the mosaics, and it is recommended finally that what has survived of the interesting carved wooden doors at the main entrance be treated chemically to destroy the wood-worm and then reset as part of a bronze door on pivots. Among the alterations suggested in Part III, the following may be noted: The reopening of all blocked windows, particularly those of the aisles; the removal of two later walls which block off the eastern ends of the outer aisles from the transept; the removal of a transverse wall in the narthex; the reopening of the lateral doorways from the narthex to the inner aisles; and the opening of the original northern doorway in the west or front wall of the narthex, after the removal of the heavy exterior buttress which blocks it.

The most interesting portion of Mr. Harvey's report is comprised all too briefly in Part III as a "summary description of the archaeological discoveries made in the course of the survey," to which is appended a supplementary report of half a dozen pages on "additional archaeological discoveries." Unfortunately, however, the author states specifically that he will make no attempt to discuss the archaeological or historical significance of these discoveries, and merely adds a pious hope that his "plans and photographs may provide sufficient data to enable any scholars who may be interested to deal with the archaeological aspect of the matter." Although this is commendable humility on the part of a writer, obviously not an archaeologist, it rather irritates the reader who happens to have had some practical experience in problems of the sort, for the latter will realize only too clearly the impossibility of arriving at valid conclusions, second hand

as it were, on the basis of photographs and what amount to brief excavation notes. He is thus reduced to conjecture on many crucial points which could doubtless have been cleared up by a few hours of study "on the dig." Moreover, although Mr. Harvey suggests several alternative methods of preserving the mosaics of the nave and aisles—viz., (a) that they be reburied after further clearing and more detailed study, (b) that they be taken up, repaired and completed, and relaid at a higher level to serve as the modern pavement, or (c) that the pavement of the nave be repaired and established at the Constantinian level and only the pavement of the aisles raised—he states definitely at the beginning of his Supplementary Report that "it was considered desirable to fill in the excavations before the Christmas festivities." Hence one can merely hope either that an adequate archaeological study has, in fact, been made and may later appear in print, or that the mosaics will be again uncovered, taken up, and preserved as museum pieces, a course which their high artistic qualities would seem to warrant. In the following paragraphs, therefore, only a very brief and generalized interpretation of the published data will be attempted, in full realization of the many pitfalls involved.

As mentioned above, the original Constantinian church was a simple five-aisled basilica, apparently as wide as the present building but considerably shorter, certainly so on the west. The foundations of a straight wall on the chord of the present apsidal end of the north transept and in line with the exterior north wall of the church show that the church of Constantine lacked transepts, while the foundations of another wall, parallel and directly south of the one last mentioned and very nearly in line with the present colonnade of the outer north aisle, indicate that in the Constantinian church a colonnade was originally carried straight across what is now the north transept. The form and position of the sanctuary apse of this church are as yet conjectural.

The church was fronted on the west by a narthex ca. 5.00 m. wide, a portion of the west wall of which has been uncovered beneath the floor of the present vestibule, together with the northernmost of its three entrance doorways. The doorway was approached by two steps rising ca. .40 m. from west to east from a pavement of white mosaic in which appears a strip of guilloche ornament well done in red and yellow tesserae. This pavement,

presumably of the Constantinian atrium, lies at a level 1.58 m. below *datum* (i.e., the modern pavement of the nave), shows a slight slope westward, and is broken by the west wall of the present narthex. Of the Constantinian narthex, paved with white mosaic at a level 1.19 m. below *datum*, the thresholds of the central and northern doorways of the three, which opened to the body of the church, have been laid bare, together with the foundations of the wall through which they passed. Each is approached from the west by two steps rising .35 m., the threshold of each shows cuttings to receive the wooden jambs, and doors and wall are situated on a line running north and south through the westernmost columns of the present nave colonnades. The principal Constantinian mosaic, 16.36 m. long by 6.80 m. wide, is that which forms the floor of the central nave at ca. .75 m. below *datum*. The design, surrounded by a plain white ground, is divided into two unequal parts, a large square panel at the west, and a rectangular panel to the east, the latter subdivided into six squares in pairs from west to east. Although the central section of the square western panel is missing, its magnificently ornamental borders are well preserved and show a wealth of geometric and floral motifs, among them a wave pattern, a broad and intricate guilloche, an elaborate interlace, and a band of remarkably beautiful rinceaux comprising a variety of fruits and flowers, the whole rendered in a greater variety of colors than are found elsewhere in the floor. The acanthus leaves which compose the rinceaux are of the heavy weedy Roman type, sufficient in themselves to certify to the Constantinian date of the work. The six squares which form the units of the eastern rectangle are made up entirely of geometric motifs of unparalleled variety and richness. Portions of less elaborate panels have been uncovered in the two south aisles. It should be noted further that the stylobate walls of the present aisle colonnades in all instances cut roughly through the mosaic pavements above described and may hence be attributed to Justinian, and that the column plinths which rest upon these stylobates are obviously contemporaneous with the fragments of white marble pavement at the higher level. On the main axis of the church at the east end of the nave a much worn flight of three or more steps was uncovered, leading upward from the level of the mosaic floor to a higher level beneath the floor of the present crossing. The steps belong to the original building of Constantine, and when

the later pavement of white marble was laid by Justinian they were completely covered. It then became necessary to build a new stairway, which, starting from the higher marble floor at a level slightly below the modern stone paving, cut through the old steps at right angles and led downward from north to south to an entrance to the Grotto of the Nativity which is now completely blocked.

In the final pages of Mr. Harvey's text is given his Supplementary Report on additional discoveries in the northern half of the crossing and choir, made, apparently, at a date too late to permit of their being shown on his large-scale plan; and for the elucidation of the complex and obscurely described features there uncovered the reader is dependent upon a tiny "Key Plan," two fragmentary sketches, and a number of photographic plates. Hence only a brief and most general summary can be attempted. At a level considerably above that of the Constantinian nave and immediately beneath the modern paving of the crossing was uncovered a circle of well-dressed levelled masonry through the open center of which a view was originally obtained of the Grotto of the Nativity beneath. At regular intervals about the outer face of the masonry ring are vertical cuttings, conjectured to have held the upright supports of a bronze railing or screen. The circle had an internal radius of 1.95 m., its curb a width of .81 m., and its center was located ca. .35 m. north of the main axis of the church; it was surrounded by two steps, each ca. .15 m. high and .90 m. wide, which on plan approximated a regular octagon. A broad band of mosaic pavement, ranging in width from 3.57 m. to 3.76 m., surrounds the octagon of steps and traces in larger scale its octagonal plan. The portions uncovered show the same types of floral and geometric ornament as were found in the nave, although at one corner a vine pattern in flowing rinceaux fills the asymmetrical angle, while just east of this, on the north side, occurs an elaborate series of circular or octagonal panels, which contain either complex geometric designs, plant motifs, or the graceful figures of birds. One of the latter, a cock, en- framed by vine tendrils and clusters at one of which he pecks, is particularly fine and spirited. The colors employed throughout are rich and varied and the technique excellent. There can be no doubt that the stone circle, steps, and mosaic border belonged to the original church of Constantine.

A final important discovery remains to be mentioned. In the extreme northeastern corner of the outer north aisle was uncovered a short length of walling curving outward on plan. It was found to continue eastward on the same curve through the area of the present apsidal end of the north transept, forming a segment of a circle, the center of which falls on the main north-south axis of the transept near the point where that axis cuts the north edge of the raised floor of the crossing. Since this curved wall rises higher than the level of the Constantinian pavement preserved in the apsidal end of the north transept, and since the latter was cut through when the wall was built, the wall itself is later and may plausibly be attributed to Justinian. A similar, though shorter length of curved wall, was likewise uncovered in the extreme southeastern corner of the outer south aisle. Although inferences based upon such slight data are obviously premature, the reviewer is tempted to suggest that these indications point towards a typical tri-conch eastern limb in the church as rebuilt by Justinian. For, if a center of curvature be assumed for the southern curved wall corresponding to that of the curved wall in the north transept, and if the curve be struck on an equal radius, it is possible to construct on the east between the other two conches a third conch of like curvature and dimensions. Though the tri-conch plan as thus laid out is somewhat smaller than the present eastern limb of the church, it is yet sufficiently large to embrace the various grottoes beneath, and seems to center nicely upon the Cave of the Nativity. If further excavations prove that such an east end was indeed built by Justinian, they will probably also show that it was pulled down by the Crusaders to make way for the more extended transepts and sanctuary apse which still stand today. Such, at any rate, is the theory here tentatively advanced. In conclusion, it is scarcely necessary to insist upon the desirability of further excavation of the Church of the Nativity, combined with a competent archaeological study of the entire structure, to the end that the work of its three main building periods may be disentangled so far as possible.

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ARCHAEOLOGIA HUNGARICA: ACTA ARCHAEOLOGICA MUSEI NATIONALIS HUNGARICI, XIX, by Tibor Horváth. Az üllői és a kiskörösi avar temető (Die avarischen Gräberfelder von Üllő und Kiskörös). Pp. 128, 48 pls., 2 inserts, and 35 figs. in the text. Budapest, 1935.

This is one of the most elaborate studies in this series of volumes, for it discusses two large Avar cemeteries, which have fortunately been excavated almost entirely by archaeologists, so that the amount of loss has been reduced to a minimum. The work, however, is more than a mere recital of the finds at these two places, for the author undertakes an analysis of the burial customs, the variations in the finds in the graves of men and women, and the hair-rings of the Avars as a whole. He also discusses the relations of the Avars and the Germans and includes a long study of the pottery of the Avars which has hitherto been neglected. He concludes the volume with a study of the relations of the Avar finds with those from Nagyszentmiklós and those of the same and earlier periods from south Russia and the Caucasus. In a word, this volume is of the greatest importance for the study of the Avars and their relations with both East and West. Among other items of interest may be mentioned the fact that there seems to have been a pottery existing probably along the Danube in the seventh-eighth centuries, which continued to imitate Roman pottery of the second-third centuries (p. 77).

For those scholars who are dissatisfied with the use of the simple term "barbarian" to recommend collectively all the tribes which attacked the Roman Empire, such a volume is of importance, for the author is trying to analyze and to coördinate many of the scattered names and details which are preserved in late authors by giving us a picture of what the Avars were. From the sixth to the ninth century, there were empires and realms, cultures and movements which have been largely ignored, and it is the merit of this and similar works that the authors are endeavoring to fill these gaps by a study of the remains. They display sound judgment and an avoidance of unbridled imagination. CLARENCE A. MANNING
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